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Original Articles.

THE WANDERING JEW AT THE SALPETRIERE.

BY HENRI COUPIN.

There is always a kernel of truth in legends, even in the most fanciful. This is true, for example, of the widespread tale of the Wandering Jew, which at first sight seems fabricated out of the whole cloth, but which in reality may be explained by citing examples from neuropathology. On this subject Dr. Henry Meige has just published a very curious work, of which we offer a brief *résumé:*

FIG. 1. Ahasuerus. Fac-simile of an ancient German engraving (1648).

We know the beginning of the history of the eternal wanderer Cartophilus, Ahasuerus (Fig. 1), or Isaac Laquedem, according to the country. It is stated by Matthew Pâris that this Cartophilus was porter of the Prætorium of Pontius Pilate; when Jesus Christ crossed the threshold of the door he received from Cartophilus a blow: "Go on, Jesus, go faster. Why dost thou stop?" Jesus, turning, replied: "I go, but thou, thou shalt await my second coming; thou shalt walk without ceasing." According to another version, Ahasuerus is a large man

FIG. 2. The Wandering Jew, after the most ancient engraving known (Munich Library).

with flowing locks, a Jew by nationality and a cobbler by trade, "who was present at the death of Jesus Christ, and who since that time has always continued in life." Whatever be the origin, historians are at one in representing the Wandering Jew as marching haphazard, traversing cities with rapidity, appearing now at Hamburg, now at Moscow, now at Paris, etc., but always with the same aspect. The illustrators are not less unanimous in representing the portraits after a single model. Whether executed at Bautzen or at Epinal, in 1600 (Fig. 2) or in 1800, it is always of Jewish type, clad in a long cloak, the beard and the hair curled, the eye sad

(Fig. 3), the brow painfully contracted, etc. —of course with minor differences, due to the location or the imagination of the designer.

FIG. 3. The true portrait of the Wandering Jew as he was seen to pass through Avignon April 22d, 1784. Sketch taken from the National Library, Paris.

Manifestly the historians or engravers did not pass the word to one another throughout Europe when speaking of or representing the Wandering Jew; he has really existed, and those who speak of him do so in good faith. How, then, harmonize the uniform descriptions, the life and eternal wanderings, with the data of science? M. Meige maintains that there have been in reality several Wandering Jews, who have been regarded as one and the same individual because they had always the same general aspect and the same manner. These individuals were Jewish neuropaths, possessed by an impulse to travel, and presenting a common origin. Moreover, such diseased subjects exist in our own day and have been frequently seen at the Salpêtrière, attracted by the universal reputation of M. Charcot. When they are observed even superficially, and made to recount their story, one is tempted to believe that he has actually before his eyes (which is in reality the case) the hero of the well known plaint:

" Est-il rien sur la terre
Qui soit plus surprenant
Que la grande misère
Du pauvre Juif errant !" *

* Is there aught upon earth more surprising than the misery of the poor Wandering Jew !"

From the cases chosen by M. Meige, we cite that of Moser B——, called Moses, aged 38, Polish Jew, born at Warsaw (Fig. 4).

FIG. 4. Moser B——, called Moses, Israelite, wandering neuropath.

When quite a child he was taken by the Russian military authorities and placed in a special school, where he received a certain instruction. Urged by his superiors to renounce the Jewish religion, he struggled for a long time before deciding to put away the faith of his fathers. Feeling that he was about to waver, he fled suddenly and left Russia. He was then 15 or 16 years old, and was not acquainted with any trade. At this time he began to wander from land to land without any well-formed purpose. At Buda-Pesth he married, and remained some time in this city, where three children were born to him. But this halt was too long for his mood, and the passion for travel tormented him incessantly. He then conducted his family to Jerusalem, where he left them, to wander about the world. Every five years he returned from his pilgrimage, spent several days with his kin, and then again departed for new countries. As for the reason of this perpetual wandering, "it was," he said, "to find a remedy for a malady from which I have suffered since the age of 25—a malady which knows no truce or repose, and

for which I have been to consult all the specialists in the world." He has thus traversed Poland, Germany, Austria, Belgium, England, etc.

Finally the fame of the school of the Salpêtrière attracted Moses to Paris during 1892. He made his appearance wretchedly clad, with a long, worn, and patched frock. His features are those of a Polish Jew. The meagre face, profoundly furrowed, disappears under a large ill-kempt beard, curling at the sides. A mass of hair falls back over the ears and neck in greasy curls. The high, round forehead is traversed by deep wrinkles. The dense brows approach over the nose in two marked folds. These wrinkles impart to the physiognomy an expression at once painful and attentive. The long nose is joined to powerful lips. A deep fold separates it from each cheek, and its mobility is such as to render it difficult to tell whether the man is going to laugh or weep. He knows English, Turkish, Russian, Hebrew, but speaks German habitually.

Immediately on entering the study of M. Charcot, he commences the long history of his sufferings and pulls out a detailed list of his symptoms, which he begins to read. Sometimes he describes his sufferings with a certain enthusiasm, then in sudden commiseration of his unhappy fate he begins to weep most piteously. If treatment be proposed, he becomes attentive, then little by little a smile appears and he tosses his head skeptically, stating that all he has essayed has never succeeded. Moses remained a year in Paris, undergoing treatment by electricity; then, seeing that he was gaining little, he departed to seek in distant regions an unobtainable cure.

Similarly, Gottlieb M——, aged 42 (Fig. 5), began to travel very early and to frequent hospitals. Finding no remedy for his sufferings, he passed from Russia into Germany, then into Austria, on to England, finally to France, where he appeared for a few hours at the Salpêtrière. Gottlieb was born in a village forming one of the suburbs of Vilna.

The history of the other patients is almost identical, at least in its principal features, with those just narrated.

Let us now compare these neuropathic wanderers, not only with one another, but also with the Wandering Jew of the legend: we shall find a remarkable uniformity.

FIG. 5. Gottlieb M——, Israelite, wandering neuropath.

At the outset we are struck with the common origin of these patients, who seem to have set forth from the same source situated on the confines of Germany, Poland, and Austria. All speak German by preference, but are polyglots. So with the Wandering Jew: "Wheresoever he goeth," says a legend, "he speaketh the tongue of the land." Further, it is always a Jew who sets out on his peregrinations, often without apparent cause, finding in himself the impulse prompting him to wander—most frequently it is the desire to consult a new physician, to essay another remedy. *En route* they live on charity; at times, thanks to the well known benevolence of the Jews towards their fellows, they find places of credit in all the cities of the world, where they obtain a modest revenue which renders them constantly rich whilst leaving them lastingly poor. And thus is explained this stanza in the complaint which at first sounds miraculous:

" J'ai cinq sous dans ma bourse,
Voilà tout mon moyen.
En tous lieux, en tout temps,
J'en ai toujours autant." *

* "I have five *sous* in my purse—'tis all my capital. In every place, in every time, I shall have no less."

Again, like the Wandering Jew, the traveling neuropaths are very poorly clad in a large cloak or coat descending to the ground. They are almost all men in the thirties and forties, who could be readily mistaken for twice the age owing to the deep wrinkles which furrow their visages. The beard is long and ill-kempt. The beard of the Wandering Jew, indeed, is perhaps the most pronounced of his facial characteristics. The primitive illustrators have represented it with great fidelity, as may be readily observed in the engravings:

Jamais on n'avait vu
Un homme aussi barbu.*

The beards which we see in the most ancient pictures reproduce as exactly as possible those of the patients studied by M. Meige: they are curly throughout their length, or roll up on the sides, mingling with the hair which is also curly.

The physiognomy of all the traveling neuropaths expresses suffering, lassitude, despair: the meagre face, the prominent cheek-bones, the hollow cheeks, the furrowed brow, may be observed in all the patients and in all the portraits.

From a pathological point of view, the traveling neuropaths are pre-eminently victims of nervous exhaustion—neurasthenics, presenting all the characteristic physical and psychical traits. Hysteria may sometimes be superadded. The Wandering Jew accordingly appears to possess no great nervous equilibrium, for every time he has occasion to speak to some one he assumes the air of a persecuted sufferer.

From the foregoing it is manifest that the Wandering Jew exists to-day, and under the form acquired during past centuries. His face, his costume, his manners conserve the same peculiarities through the ages. The Wandering Jew of the legend and the Wandering Jew of the clinic constitute one and the same type: a traveling neuropath, wandering unceasingly, appearing to-day, disappearing to-morrow, soon followed by another who resembles him in all respects; a third will come, similar to his predecessors, then a fourth, and so on further. Cartophilus, Ahasuerus, Isaac Laquedem, Moser B——, etc., are the fruit of a nervous pathology, and their analogies are due to a common malady and an identical origin.

Paris, France.

* "Never had been seen a man thus bearded."

"MEMBRANOUS CROUP."

BY WM. A. DICKY, A.B., M.D.

The practical importance of the disease which forms the title of this paper shall be my apology for presenting a theme so trite and somewhat hackneyed; then, too, the season of the year when the greatest number of cases are seen adds renewed interest to its consideration and discussion.

Of that class of cases termed *traumatic*—caused by the inhaling of super-heated steam, the swallowing of irritant liquids—as well as those denominated *spasmodic*, I have nothing to say; nor is it necessary to speak of the occasional secondary exudations that sometimes follow measles, whooping-cough, and diseases of a kindred character. I shall therefore confine myself exclusively to idiopathic inflammation of the larynx and trachea.

We are indebted to Doctor Home, of Edinburgh (writing about the middle of the eighteenth century), for the first and most accurate description of membranous croup as a distinct disease, and his critical observations were confirmed by Cheyne in the beginning of our century, and remained undisputed until Bretonneau claimed the identity of the disease with diphtheria. Since, the subject has been considered worthy of the careful study and thoughtful consideration of some of the ablest writers and teachers in this country and Europe.

As the clinical phenomena exhibited by croup and diphtheria were carefully noted and closely studied, as well as the pathological changes revealed by the microscope, the profession has been divided into two classes, one arrayed in solid phalanx against the other, viz.: Those who believe in the *unity*, and those who believe in the *duality*, of the diseases. To my mind, from whatever standpoint croup and diphtheria are viewed, they are essentially diverse. As the general points of differential diagnosis are familiar to all, I will only mention those most important, the reasons for which will be apparent later on. The first, and one which I re-

gard as very practical, is the direction in which the membrane spreads in the two diseases: That of diphtheria spreads upward, beginning with a very small area, usually the tonsils, finally reaching the nostrils, and when death ensues it is the result of systemic infection: In croup it passes downward, invading the trachea and bronchi, gradually growing thicker with each passing hour, until finally, unless arrested by felicitous treatment, the patient dies from asphyxia. Again, in croup the exudate is upon the mucous membrane, does not reach down into the latter and the submucosa, and when removed (which can be easily done) does not leave a raw, bleeding surface; neither has the Klebs-Loeffler bacillus ever been found, since croup is not contagious. All this is quite contrary to the manifestations of the highly contagious malady known as diphtheria; and it may be added that the question of the identity or non-identity of the two diseases assumes serious proportions when the question of prophylaxis is considered. Again, I have never been able, after the most painstaking examination, to find a single case in which albumen was not present in the urine of a diphtheria patient, yet it is absent in those who suffer from croup.—Other points of difference will suggest themselves, but the foregoing are all-sufficient for my purpose.

I have said the Klebs-Loeffler bacillus has never been seen in croup; but an organism morphologically similar may be found, though it will not produce the ptomaines that would identify it as the microbe of diphtheria. And yet, in a recent report to the Health Department of New York City, the chief inspector of contagious diseases, Dr. Biggs, claims to have examined thirty-six reported cases of membranous croup, in which the exudate was limited to the larynx or extended only slightly into the pharynx, and in thirty of which the Klebs-Loeffler germ was found. Judging from this, we might infer that these thirty cases were true diphtheria, while only six were croup, and that the germ associated with the former was pathogenic; and yet, as I have indicated, a bacillus in all respects like the diphtheritic germ (except as noted) has been found in membranous exudates in the fauces. One of two things is quite certain: either our New York *confrère* makes as many (or more) mistakes in diagnosis as his fellow practitioners in the "wild and woolly West," or else all exudations in the laryngeal region should be regarded as diphtheritic and the patient consequently completely quarantined.

The management of croup will be modified to suit preconceived ideas of the cause and of the pathological changes that take place; however, bearing in mind the fact that the formation of the membrane within the larynx lessens by that much its calibre, preventing thereby the ingress of respiratory gases, treatment will be directed, first, to limiting as far as possible the formation of the exudate; to the dissolution and expulsion of such exudate; to allaying the spasmodic action of the larynx; and, finally, to sustaining the vital forces of the patient.

To fulfill the first of these indications, many remedies have been duly lauded, only to be speedily relegated to desuetude. As a rule, unfortunately, the physician is not called until more or less pseudo-membrane has been formed, and as a result the breathing is labored and difficult. But whether called late or early, it is my custom to administer turpeth mineral (*Hydrarg. sulph. flav.*), from three to five grains, which speedily provokes free emesis with much relief to the embarrassed respiration; nor do I hesitate to administer this drug at any time throughout the disease when the breathing becomes labored and difficult.—This in consonance with the teaching of the late Doctor Fordyce Barker, who claimed never to have lost a case when this remedy was early administered. To those who believe that croup and diphtheria are identical, this will be considered vicious treatment and will receive severe criticism; certainly no one would believe it wise to administer an emetic as an initial measure in diphtheria, and if he did, no such relief would follow, for the reason that until a certain amount of necrosis of the exudate has taken place between it and the mucous membrane no dislodgment can be effected. Turpeth mineral is probably the least depressing of all the agents of its class, and for this reason, if no other, demands our favorable consideration.

Recalling the fact that the stage of actual inflammation is preceded by one of conges-

tion, cold suggests itself as a very rational and trustworthy therapeutic agent, nor are its virtues in the least lessened if the stage of inflammation has been reached; the larynx being superficial in location, its beneficial effects are soon seen and felt. Pounded ice in a rubber bag or bladder, applied in the region indicated, is far preferable to cloths wrung from cold water, because of the variation in temperature of the latter and the constant wetting of the patient's clothes. The earlier and more thoroughly this is applied, the more happy the results. Bits of ice may also be swallowed, as they not only allay thirst but lessen inflammation. I prefer cold applications to hot for the reason that the latter cannot be maintained at a high temperature for any considerable length of time, which is required if they are to be beneficial.

As to remedies for internal administration, "many have been called but few chosen." From the glowing accounts that came from certain quarters concerning calomel, we were led to expect much from its use; yet I have given it in large doses and in small ones, at long and short intervals, continuously and interruptedly, and have never seen any beneficial results from its use.—I know this is at variance with the experience and judgment of many able practitioners. If the bowels are at all constipated, a sufficient amount of mercurous chloride may be given to move them freely, when the remedy is best suspended.

Quinine is the agent that to me seems to have the most beneficial effect in restraining the formation of exudate and lessening the attacks of dyspnœa that are prone to come on with the approach of evening; and coincident with this was observed a lengthening of the remissions occurring during the morning hours. To be at all effective, the patient must be thoroughly cinchonized and kept so: Nor do I trust to pills or capsules, as these are often old, dry, and hard, and as a result difficult to dissolve, and sometimes not dissolved at all, passing through the alimentary canal unchanged—gelatin and sugar will oxydize as readily as other substances, thereby impairing their solving qualities. I prefer to give in powder, using liquorice, yerba santa or milk as a vehicle, and administer two or three grains every two hours to a child three years old. At the same time I order small doses of chloral hydrate in conjunction with the tincture of belladonna: one grain of chloral hydrate, with five to ten drops of tincture of belladonna, given once in three hours until four or five doses are taken, when the mixture is suspended until further orders. It is surprising what large doses of the latter drug these little sufferers will bear, and it should be given to its full physiological effect.

These remedies have been found to be of value, as would be readily inferred from their well known physiological action: The quinine depresses the circulation and retards the migration of the white blood-cells: The chloral lowers the temperature, lessens arterial tension, and renders the fibrin of the blood less coagulable; it also is one of the best of antiseptics and a local sedative and astringent; it should be given in glycerin, which adds to its efficacy: The belladonna has an almost electric action on the mucous membrane of the air-passages in general, while its stimulating influence on the nerve centres fortifies them against the depressing effects of the disease.

Objection may be urged against chloral on the ground that it adds to the coma which is so often present, but such upon deliberate reflection will be more apparent than real. The soporific condition is caused by lack of the proper amount of oxygen in the blood, and consequent increase in the amount of carbon dioxide, and this condition of affairs in a very large proportion of cases is brought about by spasmodic action of the glottis by which the air is prevented from reaching the lungs. The chloral allays this, and the respirations are made easier, freer, and deeper; then too the entire nervous system is quieted, placing the patient in a more favorable condition.

The dissolving of the pseudo-membrane, so far as it can be done, must be by remedies applied topically, and the only practical and satisfactory way of accomplishing this is by means of vapor or spray. In those cases in which the membrane invades the pharynx, the ferment of the juice of the pineapple (*Bromelin*) is highly spoken of by those who have used it. Or pineapple may be cut in small, thin slices and the patient be allowed to eat it:

the fruit itself is said to act best in those cases in which the membrane is thick and leathery. Trypsin in conjunction with bicarbonate of soda in a hot spray is also warmly spoken of, and is frequently resorted to. Our instrument-makers have contrived many ingenious atomizers, some good, many worthless, and unfortunately the best cannot always be used to advantage and sometimes not at all. Numerous solvents have been recommended from time to time, but of these I shall mention only peroxide of hydrogen, lime-water, and bicarbonate of soda. Between the two latter I could never see any difference in action—if action they have; indeed, in a large proportion of cases I am very skeptical as to their utility. When we study the anatomy and physiology of the parts involved, and the location of the exudate, it requires an immense amount of faith to believe that a sufficient quantity of medicated spray can reach the membrane to dissolve much, if any at all, of it. I am satisfied that the only good derived is not from the drug *per se*, but from the hot spray which carries it, and this is beneficial only on account of the warmth and moisture, which diminish the swelling and lessen the reflex irritability.

The slaking of lime, with the patient under a canopy, is a favorite plan with many and often resorted to, but I entertain the same opinion of this as of the medicated spray; yet doubtless it will always be used, for the exceedingly logical reason that we are told to use it by standard text-books; keeping the air of the apartment in which the little sufferer is confined thoroughly saturated with moisture will be just as beneficial. A tin cup of water on a stove in one end of a room, with the patient in the other, has always seemed to me farcical, and yet this is often witnessed.

I recommend the administration of an emetic of turpeth mineral, not only at the commencement of the disease but at any time during its continuance; in this way much of the membrane is mechanically thrown off, allowing an ingress of air and the consequent liberation of carbonic acid. I have witnessed the most gratifying and permanent results from its use—labored and difficult respirations, blue lips and finger tips, and drowsiness, all pass away. In but one instance have I ever found it to produce any unpleasant symptoms, and that was in a case not seen until the sensibilities were so obtunded from carbonic-acid narcosis that it did not bring on prompt emesis but resulted in entero-colitis, the patient dying from asphyxia in a few hours.

During the last stage of the malady the most decided stimulation is necessary to keep up the exhausted nerve-centres; and whiskey, camphor, and caffeine will head the list. Throughout the entire course of the disease the medical treatment should be supplemented by the administration of concentrated, easily digested food—milk, warm or cold, as may suit the taste of the patient, predigested or not as the judgment of the physician may dictate. When it is thought best to employ predigested milk, the following simple plan will be found serviceable: For a tumblerful of milk, take say two grains of pancreatin and eight or ten grains of bicarbonate of soda, and dissolve in two tablespoonsful of water—this to be added to the milk at the time it is taken. Beef extract, mutton broth, and the like will prove good substitutes.

To summarize briefly, the medical treatment of croup that will offer the best chance for recovery is: Maintain a warm room, the air saturated with moisture; emetic of turpeth mineral, repeated whenever the respiration becomes embarrassed; if the bowels are constipated, a sufficient amount of calomel to move them thoroughly; ice to the throat, either in a rubber bag or bladder; if thirst exists, pellets of ice internally; quinine to the production of decided cinchonism, which is to be maintained; a sufficient amount of hydrate of chloral to allay irritation of the air-passages, along with decided doses of belladonna; inhalation of steam, medicated or not as may suit the peculiar belief of the individual practitioner; all to be supplemented by the administration of a suitable amount of easily digested food.

Doubtless this paper would be incomplete without some reference being made to intubation and tracheotomy, each of which has its advocates. Statistics prove that the former saves practically forty and the latter thirty-five per cent. of cases. The trouble

with tracheotomy is that in private practice it is difficult to obtain the consent of the parents to the operation until it is too late; and its success depends upon three factors named in the order of their importance: The time at which the operation is made: The patient's care and surroundings: The skill of the operator. But in spite of all we can do, both medically and surgically, in the home that is entered by croup, death will too often cast its dark and forbidding shadow, and some of the saddest memories of the physician are those connected with this disease.

Tiffin, Ohio.

OBSERVATIONS ON THE BACTERIOLOGY OF THE FEMALE GENITAL TRACT.*

BY O. B. WILL, M.D.

Recent observations prove that numerous bacterial organisms exist in the normal secretions of the genital tract from a period shortly after birth. The cervix uteri and vagina are especially the home of micro-organisms—some benign and pretty constant in character; others, not having been studied separately, remain undetermined, and consequently to some degree objects of doubt and suspicion.

Some species and types found in the normal secretion are not sufficiently pronounced as to either morphological or chemico-vital character to be even temporarily classed in the scale of disturbing elements. Some, however, under favoring circumstances have been discovered to be saprophytic, assuming different forms, and taking an active part in established retrograde changes, and have even proved disastrous when introduced into the blood of lower animals. It is altogether probable that some of the apparently harmless organisms may yet be found under favorable circumstances to assume vigorous pathogenic character; and it is equally fair to assume the probability of their being but accessories, so to speak, to the normal functional activities and physiological attributes of the tissues in which they reside, or with which they are found in contact. If it is true that leucocytes or other phagocytic organisms possessing comparatively independent existences are essential to the protective forces and well-being of the body, it certainly is not far-fetched to attribute health-giving motives to many of the apparently non-pathogenic bacteria found in the genital as in other tracts of the economy.

It is not my design to attempt strict scientific classification of these bacterial elements, but only to present the most prominent and well established features of their existence.

First we have the *Bacillus vaginæ*, which has not been demonstrated to assume pathological functions under any circumstances; it probably ranks in some measure with the semi-independent organisms of the economy engaged in its secretory and other protective functions. The normal vaginal secretion is acid, whitish, milky in consistence and color, and contains among other non-pathogenic bacteria the *bacillus vaginæ*, whose product of lactic acid induces the normal reaction. This acid reaction has been found in every case I have had the opportunity of estimating and testing, and I have been afforded the privilege in a number of instances of securing secretion from the undoubtedly healthy in every respect. On the contrary, abnormal, or what Döderlein calls pathological secretion, is usually yellow in color, creamy in consistence, either feebly acid, neutral or alkaline in reaction, and characterized by a thick, tenacious, yellow mucus.

Whilst the *streptococci*, the *pyogenes aureus* and other septic staphylococci are frequently found in the female genital tract, it is a grave question under such circumstances, even if the patient appear well, whether the secretion of the parts can properly be called normal. I am aware it is stated that these pathogenic microbes are found in normal secretions, and thus give rise, especially in puerperæ, to auto-infection. My investigations have led me to coincide with Doderlein, that no secretion can be strictly normal that carries with it a deadly virus, awaiting only the completion of a physiological function, or the infliction of some injury, to begin its deadly work. I prefer to consider the condition of such secretion as a pathological one—a disease, so to speak, in itself—and an evidence of the necessity of the greatest concern in unmasking its hideous form and protecting its unsuspecting victim. This reference is proper not only with respect to

* Read before the Tri-State Medical Association.

the puerperal state, but in any case in which the character of secretion spoken of exists.—Of course I am now referring to the pyogenic and other septic organisms, apart from those of strictly specific character such as the bacilli tuberculosis, gonococci, etc. Evidence is usually afforded unaided vision as to the existence of these species of bacteria, in the color and consistence of the secretions and, if further search be made, in the peculiar appearance of the cervix uteri or other secretions of the mucous membrane the seat of the active morbific principle.

In the normal secretion the acidity seems to prevent, or at least greatly retard, the growth and propagation of the *Staphylococcus pyogenes aureus*, as well as the pathogenic streptococci. The pathological secretion, on the contrary, seems to be constituted one of the necessary factors for maintaining the vitality, and to some extent indulging the propagation, of all these pathogenic organisms, and they are consequently found therein in greater or less abundance. The alkaline secretion from the cervix uteri frequently aids in neutralizing the acidity of the vaginal secretion, and serves to more fully promote the development of these pathogenic entities. In this latter class of cases the danger of what is called auto-infection necessarily exists, and a demonstration of the impending danger would clearly indicate the duty of the physician in the premises. For while it may be a question whether the physician is justified in douching or making a vaginal examination in obstetric practice where a strictly normal state of the secretion exists, there can be no question as to his duty when a demonstrated pathological secretion is present. And how is he to secure such knowledge without at least a partial contact with the genitals?

In all non-puerperal cases the physician's duty is clear, a restoration to the approximately normal condition being the only therapeutic alternative. In this connection therefore it may be stated that Doderlein found lactic acid, when used as injection, capable of destroying and arresting the propagation of the ordinary pathogenic organisms. The production of lactic acid as the result of nutritive activity on the part of the *bacillus vaginæ*, is deterrent in its effect upon the presence of pathogenic organisms, and the question naturally arises as to how the secretion ever assumes the pathological character favorable to the propagation of these same organisms. The uterine secretion is found to be at least an unfavorable medium for the cultivation of bacteria of any kind, but when it becomes unusually free through acute or chronic congestions and consequent increased glandular exudation, the latter, being alkaline, probably promotes, if it does not induce, the vitality and propagation of all pathogenic microbes by neutralizing to a sufficient extent the normal acidity of the vaginal secretion. Where such condition exists it seems to argue the turning up of a subsoil, so to speak, of uterine tissue unusually favorable to bacterial life and energy, and by continuity the various pathogenic organisms are rapidly transmitted to the Fallopian tubes, where a much more congenial environment seems to exist. In this way, no doubt, are transmitted both local and general septic disorders, whose germs would not in the ordinary state of the genital tract find conditions suitable for their propagation. (This is markedly the rule in the case of the tubercle bacilli, the germs of diphtheria, and allied disorders, for the study of whose ultimate pathological entities I have had little opportunity.) That, however, which is in my estimation of most concern in this connection, and whose influence is the most far-reaching in all its evil consequences, is the gonorrhœal contagium, whose vital essence, the gonococcus, finds its veritable home in the genital tract, and especially in its vaginal and tubal portions. In this direction I have made much research, and am convinced that the greater proportion of all chronic inflammatory diseases of the female genital tract are due to the contagium of this venereal disease.

The gonococcus may or may not be simply a modification of some of the apparently non-pathogenic bacteria found in the normal vaginal secretion, and may or not be the result and not the cause of the morbific action, but the presence of this very marked type of micro-organism, always associated with the clinical evidences of the disease in question, has come to establish it in a decidedly causative relation. But, as if to further show the real uncertainty as yet of

the whole subject of specific pathogenic micro-organisms, the curious doubt seems to be developing into a recognized fact that gonococci are found in secretions and discharges not of gonorrhœal origin. This is developed in the recent numerous investigations into the nature and origin of suspicious discharges from the genitals of maidens and children. Whilst formerly every case in which the gonococci were found was decided to be specific in character, now doubt is being expressed as to the reliability of such evidence, inasmuch as bacterial organisms of identical morphological type are found in discharges almost certainly not specific in origin, or at least arising in persons whose chastity is unassailable and whose condition and position preclude all probability if not possibility of infection. Vibert and Bordas found, to all appearances, identical organisms in six instances where blennorrhagia in young girls was attributable to other than venereal cause. In attempts to cultivate the gonococcus, positive results were obtained upon bouillon, agar, and potato; thus it would appear that cultivation is not sufficient to make the diagnosis absolute. Only one variety of micrococcus was found in the acute vaginitis of little girls, and it presented all the features of the gonococcus. These authors state that, in their opinion, at the present time the question of the gonococcus is far from being solved with the certainty that is necessary in forensic medicine, and that the expert is in no case authorized in affirming the blennorrhagic nature of a vulvitis or vaginitis based upon a bacterial examination, no matter how complete it may be. On the contrary, the majority, perhaps, of investigators are inclined to the opinion that the presence of the gonococcus is sufficient evidence of the specific nature of the disease, no matter what the apparent circumstances or who the individual. The means of infection are so numerous as to practically prevent certain isolation, and the attacks of purulent ophthalmia occurring so frequently in children suffering from vulvo-vaginitis of supposed simple character is additional evidence of the correctness of the microscopic revelation.

Nearly a year ago my attention was called to a little girl only two years of age, who for some weeks had been suffering a very profuse vaginal discharge of signally pathological character. Great anxiety was manifested by the parents, as the case had resisted all therapeutic measures of a domestic character, particularly cleanliness. A microscopic examination revealed the presence of what I believed to be the conventional gonococcus; but all knowledge of any venereal disease was denied by both parents, who readily submitted to examination for the purpose if possible of settling the question, and in whom I was unable to find any evidences; as the only other members of the family were two little boys perfectly well and hearty, and no suspicious circumstances could be determined, I was reluctantly obliged to confess my inability to account for the specific character of the malady, and with equal reluctance felt almost obliged to surrender the cherished conviction that the presence of the gonococcus was proof positive of the specific nature of the disease. Was I at fault; or is it true that a micrococcus exists bearing so close a resemblance to the specific variety as to deceive the ordinary examiner?

Some months later I was requested to advise in the case of two sisters, aged respectively 12 and 8 years, who were suffering much from a profuse yellow irritating vaginal discharge, which appeared first in the person of the younger. With the above experience fresh in mind I examined with care, and again discovered the presence of the familiar gonococcoid form. Without at once expressing my convictions, I set about looking up the history of the cases, telling the mother nothing more than that it was a catarrhal discharge, probably contracted as in the case of sore eyes by contact with discharge from some other person. She strenuously (and I believe honestly) denied the existence at any time of anything of the kind in her own person, but promised to give me all the aid she could in ascertaining the facts. A day or two later she learned from the younger child that a little daughter of a neighbor with whom the former frequently associated had for a long time been suffering from a discharge so profuse that the fact had been repeatedly noticed and even commented on by the children themselves. Being personally acquainted with the father of the neigh-

boring child, I made bold to question him with respect to the matter, when he at once acknowledged the infection, and expressed great remorse concerning its effect upon his child. The mystery was thus solved in respect to these cases, and, I am free to confess, the result strengthened my flagging trust in the diagnostic importance of the organism in dispute.

I also must confess to a still lingering suspicion that the bacterium in question is responsible, and not without relationship to venereal disorder, even when found in good society, for this form of blennorrhagic disorder is so widely diffused that the wonder is that any escape it. The gonococcus finds its most congenial atmosphere in the genital tract, and it is astonishing with what rapidity, under the favoring circumstances of local congestion and secretory disorder, it will spread even into the Fallopian tubes and peritoneal cavity. I have time and again, during experiments in catheterizing the tubes, drawn from the latter secretions in which the gonococcus was found, even though no grave tubal disorder was suspected, and I have no doubt that most of the serious and destructive maladies of that region arise from the insidious extension of the gonorrhœal microbe. I believe the disorder to be the bane of woman's life, the price she often pays for marital honors, and the laparotomist's best friend.

It is barely possible, as Vibert and Bordas suggest, that varieties of bacteria exist closely resembling the gonococcus, but differing from it in some essential particular not yet discovered, in view of the lack of uniformity either as to the best media for cultivation, the proper temperature, the length of time required, or the appearance of the colonies of cocci after they have developed. What may thus be true of the essential organic element of gonorrhœa may be likewise true of the causative factors of other morbid conditions of the genital tract. The evident bacterial and apparently non-pathogenic elements easily found, we may yet learn to differentiate and assign to their proper rôle in the causation of disease, by changing and differently arranging the elements of culture, and thus bringing out a dormant pathogenic character.

From this hasty review it will be made evident that however much evidence of error or laxity may be present in this epitome of experiences, the fact remains that at the present time no *absolute*, but only *approximate*, reliance can be placed upon the diagnostic accuracy of bacterial morphology in disorders of the genital tract in women.

Peoria, Illinois.

FIFTEEN CONSECUTIVE CASES OF MALIGNANT APPENDICITIS.*

BY HAL C. WYMAN, M.SC., M.D.

I employ the word malignant in defining these cases, because in all the vital powers were greatly enfeebled; many moreover were bordering on collapse; and not one, I think, could have recovered if treated with drugs. All came under my care since the first of May, 1893, or in a period of about six months, and all lived within a radius of one hundred miles from the city of Detroit.

In six, foreign bodies were removed from the appendix or the abscess adjacent; in seven, the appendix was removed; the remaining eight were treated by simple incision and drainage. The duration of illness before operation varied from three days to three weeks. Two cases were treated for typhoid before correct diagnosis was made, but all were correctly diagnosed before I was consulted.

Four of the patients had general peritonitis in consequence of the disease being of the fulminating type owing to the perforation appearing suddenly and before adhesions had time to form. The remainder had the perforated appendix enveloped in a mass of adhesions and pus. The temperature before operation ranged from 97° to 103° in some of the cases; those with subnormal temperature were among the fulminating cases, vomiting occurring in nearly all.

Some had a slow, others a rapid pulse. Tenderness in some part of the right of the abdomen was invariably present, and all complained of pain. Some had intestinal obstruction; in others the bowels moved regularly or were loose. Some had purulent

*Read before the Northern Tri-State Medical Association.

discharges from the bowels after the operation; in one a fæcal fistula followed, making necessary the reopening of the wound, the Lembert suture with catgut being used for the purpose.

Convalescence varied in duration from two to four weeks after operation in all save the one with fæcal fistula, which is still under treatment.

This running summary of items having a bearing on the history of appendicitis is submitted in lieu of a detailed description of each case as evolved from day to day.

The incision was always made at the point in the abdominal wall where the tenderness was located, and where something abnormal could be felt. It sometimes happened that nothing but tense muscles could be discovered on the right side of the abdomen, in contrast with relaxed muscles on the left side, until the patient was profoundly anæsthetized; then, all muscular spasm being absent, the mass could be felt through the abdominal wall in the region of the appendix. This was the point selected for the incision. The skin and superficial fascia were divided parallel with the median line for a distance of two to three inches, according to the amount of adipose overlying the muscles; the latter were then divided with the handle of the scalpel in the direction of their fibres.

The first layer of muscle in the region of the appendix crosses the sub-layers at nearly right angles, and to divide and reach the peritoneum it was necessary to use two retractors. The peritoneum was raised with many-toothed forceps and cut with scissors to admit the index finger.

The abscess cavity or the peritoneum was carefully explored in search of the appendix; if it was not found readily and pus flowed, a soft drainage-tube was inserted after moderate irrigation, and iodoform gauze packed around that part that came in contact with the wound. When the appendix was found, it was drawn up through the opening, tied with a strong ligature of silk or catgut applied close to the cœcum, and cut off; the stump was then pushed into the cœcum, and the peritoneum stitched over it with Lembert sutures. Everything was made ready beforehand so that only a minimum of time was occupied by the operation.

The wound in all cases was drained with a tube, and where the operation involved breaking into the abdomen outside of the adhesions the break was plugged with iodoform gauze, one end of which hung from the wound. The external wound was sutured only in fulminating cases, and then only enough sutures employed to approximate the margins so that contractions of the muscles in coughing or vomiting would be unlikely to crowd out the gauze. A pad of antiseptic gauze was placed over this wound, in turn overlaid by sterilized cotton, the whole held in place by the many-tailed bandage.

On all occasions it was endeavored to restrict the wound to the smallest possible dimensions, to secure perfect drainage, and to provide a dressing which protected the parts from the air. In suppurating cases the dressings were removed twice in twenty-four hours, and a fifteen-volume solution of peroxide of hydrogen, duly diluted one-half, employed to clean out the abscess cavity. The tube was removed when the discharge became insignificant. After the operation, morphine and all opiates were forbidden. Calomel, in one-tenth grain doses along with two grains calcined magnesia, was given every three hours until the bowels moved freely. When temperature rose, the bowels were again acted upon by the mercurous chloride or by salines. When the repair of the wound and healing of the abscess was fairly commenced, as indicated by the discharge, iron and bitter tonics were freely given.

The diet for the first three or four days was limited to gruel made of corn-meal, water and salt.

The fæcal fistula mentioned as occurring in one case was the result of the catgut coming away during a douching of the abscess cavity with peroxide-of-hydrogen solution. In several cases tags of omentum were found projecting into the abscess cavity and were duly ligated *en masse* and removed.

The closure of the wound in every case was perfect, and, so far as I have been able to learn, in no instance was there hernia in the scar—this I attribute to the method employed in separating the abdominal muscles, which secures more perfect union of the fibres than when the latter are cut across; the bond

of union is stronger and the muscles lap over in the natural manner. Indeed, the only serious trouble encountered in any of the cases was closing the fæcal fistula before mentioned. My finger easily passed through this into the cavity of the cœcum; I could feel the ileo-cœcal valve. The union of the cœcum to the abdominal wall appeared firm. With the scissors I made a cut three-quarters of an inch long through the upper angle of the fistula including the cœcum and abdominal muscles and fascia. The blood was quickly stanched with a dry hot towel, which, when crowded by the finger into the upper end of the wound, revealed an opening into the peritoneal cavity. The edge of the cœcum was now caught with forceps and drawn gently out so that its contents could not enter the peritoneum into which the finger, letting go of the towel, was pushed. The cœcum was peeled from its attachment to its parietal peritoneum and drawn through the wound until it was accessible for suturing, and when sutured was returned to the abdominal cavity. The fleshy part of the wound was closed with two sutures. A pledget of iodoform gauze was pushed down upon the cœcum, and a surface dressing of cotton applied.

Detroit, Michigan.

CLINICAL LECTURES AND REPORTS.

GONORRHŒAL INFECTION OF WOMEN—ITS SURGICAL TREATMENT.*

BY EDWARD W. JENKS, M.D., LL.D.

When Noeggerath promulgated his paper on "Latent Gonorrhœa," the views therein embodied were quite generally regarded as chimerical, and his position held to be untenable. Since the germ theory of disease has been accepted by the profession, the pathology of many disorders is better understood; and the clearer the comprehension of the pathology of any affection, the more rational must be our treatment and the more nearly will it approximate to an exact science.

The patient from whom I removed several abdominal sutures to-day, had her ovaries and Fallopian tubes extirpated last week. She is one of the many victims of the specific disease to which your attention is now directed. You have seen the ravages of gonorrhœa among patients in the examining-room, and I now, for the purpose of better illustrating my subject, exhibit several specimens of pus tubes and disorganized ovaries, the diseased condition of which has been caused by this malady.

It is a recognized fact that in the entire animal kingdom the dominant passion is the sexual; and the intelligent, cultivated biped man is no exception to the rule. This being conceded, it must be admitted as no less true that in consequence of this passion diseases are engendered and propagated. I might moralize on this state of affairs and make such the text for a lecture of unlimited duration, but this is neither the proper time or place.

All diseases are consequent upon some violation of moral or physical laws, but on this occasion the lesson deduced from violation must be inferential. Formerly gonorrhœa in women was regarded as a simple affection which ran its course and, as a rule, was spontaneously cured in two or three weeks, while syphilis was held the most disastrous and most to be dreaded in its effects of any venereal disorder. It is true that gonorrhœa is not strictly a constitutional disease, like syphilis, neither can it be transmitted to offspring, like the latter; yet it is now a generally accepted belief, and one which I entertain, that the majority of inflamed Fallopian tubes filled with pus, and many diseased ovaries, are produced by gonorrhœal inflammation—not necessarily from an acute attack, but as a result of a latent form contracted months, perhaps even years, before. A man with gonorrhœa and considered practically cured, may yet have lurking somewhere in his generative canal specific germs which can be conveyed to some portion of the genital tract of a woman. It is claimed that from 75 to 80 per cent. of the male residents of all large American cities have had gonorrhœa at some time in their lives, and that of this great number many are uncured and the gonococci consequently lurk for an indefinite number of years some-

*Gynæcological clinic, Michigan College of Medicine and Surgery. Stenographically reported for the MEDICAL AGE.

where upon the epithelia of their generative canals. How frequently we find men who have had gonorrhœa some time before, who on indulging in sexual excess develop an attack of urethritis, followed perhaps by stricture. If the trouble ended here, there would be no occasion to allude to this malady in connection with a gynæcological clinic; but, unfortunately, many of these men, after "running the pace," marry, and become the fathers of families; and then, in many instances, their wives become the innocent victims of the former transgression. And it is of the latter class of patients rather than "women of the town" that I am speaking, for gonorrhœa in the respectable and virtuous is of no infrequent occurrence, and offers on only too many occasions an opportunity for the display of the skill of the gynæcologist.

Noeggerath taught that one of the evil results of latent gonorrhœa in the male, although the initial attack might have occurred years before and perhaps been forgotten, is that their wives, sooner or later, become subjects of uterine or pelvic inflammation; further it must be borne in mind that marriage of itself entails upon many women various severe and annoying disorders of the sexual organs from such causes as modes of living, improper habits, defective hygiene, etc., that may predispose to infection. In addition sexual excesses, induced abortion, and hereditary infirmities, are all factors in the production of pelvic diseases. Look at it as we may, and trace to the utmost all autogenetic causes, the unrefutable fact remains that in those localities where the opportunities for acquiring gonorrhœa are the greatest, there pelvic inflammations in women are the most frequent.

At the present time the prevalent belief among gynæcologists is that the chief cause of pelvic inflammation, aside from childbirth, has its inception in the Fallopian tubes, and that tubal disorders are more frequently due to gonorrhœal infection than to any other cause. It is possible that a woman possessed of uncleanly habits, and with a catarrhal discharge from the uterus, may cause urethritis in the man with whom she cohabits, and further that in such a woman the pelvic organs may be infected in a manner similar to infection by gonococci from the male urethra; but in mentioning this possibility I must give utterance to a personal belief that pelvic inflammations such as are derived from gonorrhœa are usually from hetero-genetic infection.

It is not necessary to discuss the pathogenesis of gonorrhœa, nor to more than incidentally allude to the progress of the disease in the male genitals. There is no question that many men are cured, and with this consummation lose the power of infection; but clinical observation has taught most impressively that the man possessed of urethral stricture is unfitted for marriage, since this is a condition especially apt to secure infection to his wife. It is also quite possible that a woman with latent gonorrhœa may during the excitement of coition discharge enough gonococci from the Fallopian tubes or from the endometrium to cause urethritis in the man; but with this side of the question it is unnecessary to deal. Speculate or theorize as much as we may, it cannot be controverted that the wives of men who have had gonorrhœa are more frequently the subjects of pelvic disorders than wives whose husbands have never been infected. If these women become pregnant they are peculiarly liable to abort. It is a law of Nature that any seed to attain its full fruition requires its own peculiar and proper soil; and a disorganized endometrium is not the soil in which we would look for a fœtus to attain its full and perfect development. In the event of a gonorrhœa-infected woman becoming pregnant and carrying the child to full term, her liability to and risk of post-partum troubles would be much greater than that of a non-infected woman. I have in mind an innocent wife who was infected with gonorrhœa by her husband; who became pregnant, went her full term, and in labor ruptured a pus tube and died in consequence. A little more than a year ago the husband married again and promptly infected the second wife, who came under my care. I found in her the evidence of infection, and instituted free drainage through the uterus. Ultimately, and to my surprise, she became pregnant, but in the sixth month of gestation, without any apparent cause, miscarried. The pus tube still abides with her, but as it is well drained

through the uterine canal I cannot insist upon an immediate cœliotomy, although she expects and anticipates the operation; but as she has not again become pregnant and is determined not to, surgical interference is indefinitely postponed.

A woman may have an acute attack of gonorrhœa and scarcely notice it, but as a rule it first infects the vulva and from thence may invade the urethra and the glands about the vulva; and if there is painful urination, and pus can be pressed from the urethra, there is but little doubt regarding the character of the disease; the vulgo-vaginal glands are peculiarly liable to be involved in this specific disorder, while vaginitis from gonorrhœal infection alone is of rare occurrence. The most disastrous effects are of a chronic character, regardless of the manner of their infection; and undoubtedly the periodic changes, with the increased glandular secretion consequent upon ovulation and menstruation, cause the disease to be more serious with women than with men. Much has been written upon this topic, and among the latest productions is an exhaustive paper by Doctor Fred. Byron Robinson, published in the MEDICAL AGE of last July, who has unquestionably given close and careful study to the subject in a way that commends itself to the general practitioner as well as to the gynæcologist.

We have good authority for the belief that with women the particular germ known as the gonococcus finds most effective lodgment upon the cylindrical epithelium of the genital area; hence we find no evidences of chronic gonorrhœa within the vagina, because its mucous membrane is covered with squamous epithelium. On the endometrium, when the gonococci have once found lodgment they may have a home for an indefinite length of time; and gonorrhœal endometritis may continue for years, manifesting itself by a continuous yellow leucorrhœa in consequence of a breaking down of the epithelium of the uterine cavity. If the disease confined itself to this cavity it would be more amenable to ordinary treatment, but the gonococci speedily invade the Fallopian tubes, which also are lined with cylindrical epithelium.

First there will be an inflammation in the Fallopian tubes, and then the products of inflammation, if discharged through the fimbriated extremities into the peritoneal cavity, induce localized peritonitis followed by adhesions; not infrequently, however, the fimbriated extremity will be effectually closed, when the corresponding ovary is rendered useless. As the disease progresses, pus is formed within the tube affected, which sometimes discharges through the uterus into the vagina; as long as there is adequate drainage the woman can live without much pain; but more commonly the uterine end of the tube is closed in the same manner as the fimbriated extremity, and simultaneously the sufferings and dangers are aggravated. The pent-up pus, which is constantly increasing in quantity, must have an outlet, and, as both ends of the tube are sealed, it per force breaks through into the peritoneal cavity, developing pelvic peritonitis with all its suffering and risks. Sometimes a general peritonitis follows the rupture, and not infrequently in such an event the termination is fatal. The most common results, however, of these repeated attacks of pelvic peritonitis, whether from rupture of tube or discharge of pus through the fimbriæ, are essentially the same, namely, the formation of new adhesions with every attack.

The longer the continuance of the disease and more frequent the attacks of pelvic peritonitis, the more numerous and the firmer do these adhesions become. The disease often extends by reason of the gonococci traveling along the fimbriæ into the glandular structure and the cylindrical epithelia of the ovaries, when disorganization of these organs necessarily follows.

There are many distressing constitutional symptoms, and some that are entirely sympathetic, accompanying gonorrhœa, of which the anæmic and care-worn faces of the subjects afford abundant evidence. I cannot enter into an exhaustive discussion, from either a pathological or a remedial standpoint, of this subject at this juncture, even if so disposed, but the importance thereof to not only the gynæcologist, but also to the general practitioner, is so great that I desire as far as lies in my power to emphasize it. Many in the medical profession have been slow to adopt the germ theory of disease, and have long doubted the persistent vitality

of the gonococcus, even when it finds soil adapted to its culture. But there really seems little reason for doubting the essentials of the doctrines concerning this disease as taught by Noeggerath and a multitude of others. Of late there have been many contributions published tending to bring discredit upon the theory that the gonococcus is the specific germ that causes gonorrhœal inflammation, and it has likewise been stated that this germ is found elsewhere than in the generative passages. I lay no claim to being a bacteriologist, but it seems to me the preponderance of evidence thus far tends to sustain the view that the gonococci are the particular germs causing the disease under consideration. Without, however, endeavoring to settle these points, which can only be definitely determined in the laboratory, clinical investigation and experience teach beyond reasonable doubt that whatever the *fons et origo* of gonorrhœa may be, the disease in women is extremely common and its disastrous results have not been depicted in extravagant terms.

The treatment of acute gonorrhœa need scarcely be considered here, as the class of patients to which I have mainly alluded do not afford opportunity for observing the disease in this stage; it is the chronic stage of gonorrhœa with which the gynæcologist is most frequently familiar.

In gonorrhœal endometritis, the lining membrane of the uterus should be thoroughly curetted and carbolic acid applied, after which the organ should be packed with antiseptic gauze, which at the same time serves as a drain to the cavity. The Nabothian bodies are also liable to be involved, and should also be curetted and treated similarly to the endometrium. The vulvo-vaginal glands, which secrete seminal fluid, are also peculiarly liable to be attacked and thus prove a source of pain and chronic discomfort; it is evident they are infected if fluid of a semipurulent character in any quantity can be squeezed from the ducts, when the mildest effective remedy is free incision and cauterization; in many instances their entire removal is demanded.

If the Fallopian tubes are the seat of specific disease, and pus has formed therein, to my mind there is but one effectual means of cure, viz., removal. As already stated, if there is adequate drainage of the tubes by the uterine route, a woman can live in comparative comfort for an indefinite length of time, and removal can be postponed; but on the other hand, if there is no such drainage, the pus will sooner or later escape into the cavity of the peritoneum, either by the way of the fimbriæ, or less commonly by reason of rupture, with the results of which I have heretofore spoken. When we find by physical examination the unmistakable evidence of a Fallopian tube distended with pus, the removal of such tube and its accompanying ovary, if long postponed, is at the risk of the patient's life. Expectant treatment in this condition is of no avail, and is the same kind of a risk. Electricity, which promised us so much, has been faithfully tried and found utterly lacking. The only hope in such cases rests with skillful surgery, and the only hands that should essay its performance are those of the trained abdominal surgeon. In speaking so positively, I do not retract one word heretofore uttered deprecating the too frequent extirpation of ovaries and tubes or in advocating conservative gynæcological surgery. It is a surgical iniquity to make an operation with danger or mutilation if safer methods can hold out the promise of relief, while it is conservatism pure and simple that adopts the best and promptest mode of treatment.

Detroit, Michigan.

DOCTOR WILLIAM F. WAUGH.

It is announced that Doctor Waugh, of Philadelphia, who so long has been the manager of the *Times and Register*, will remove to Chicago. We wish him success in his new field of labor.

CHLOROFORM IN STICKS.

Such is a rather startling suggestion, but according to the *British and Colonial Druggist* not altogether impossible of accomplishment. It seems Anschütz, of Berlin, has discovered solid compounds of chloroform from which the fluid chloroform or chloroform vapor can be sufficiently easily extracted to permit of use for anæsthetic purposes.

Society Meetings.

WAYNE COUNTY MEDICAL SOCIETY.

REGULAR MEETING, Nov. 16th, 1893.

Doctor Samuel Bell reported ten cases of phthisis which occurred in an institution in the eastern part of the city, showing pretty conclusively the communicability of the disease, and proving that bacilli live in dried sputa.

Doctor E. B. Smith suggested that in view of the action taken by the State Board of Health, this subject could be made one for discussion.

Doctor J. S. Dean: The communicability of the disease is shown by the number of cases where husband and wife have infected each other. Shutting up patients, whatever effect it will have in preventing the spread of the disease, will shorten their lives. If, instead of being quarantined, the patients were sent to Arizona as soon as their condition is detected, a great many would recover: I have known several physicians who recovered in that climate, although in the last stages of the disease.

Doctor G. V. Voorhees: I believe that phthisis is an infectious disease under certain conditions, and one of the main conditions is predisposition: when there is no predisposition it takes long exposure before the disease is contracted.

Doctor A. Stewart: Predisposition entailed by heredity is a very important factor in communicability. The destruction of the sputa and the isolation of the patients are measures very difficult to carry out.

Doctor L. E. Maire: Heredity is perhaps the most frequent predisposing cause, but phthisis may be contracted from exposure to infection. Some occupations apparently favor its development. I do not believe the percentage of cures is any better now than it was a hundred years ago.

Doctor W. R. Henderson: The efforts of the State Board of Health to suppress the disease will result in the education of the people to the danger of exposure to infection, and teach them to be more careful in the disposal of the sputa.

Doctor E. B. Smith: Physicians should not wait for the State Board of Health to educate, but should themselves point out the dangers of phthisis, and instruct the people what precautions to take. The discharges from tuberculous abscesses are as dangerous a source of infection as the sputum from a tubercular lung, and should be burned with the dressings. To show that exposure to infection is dangerous, a physician as an experiment slept for several nights in a ward occupied by a number of patients, and, as the result, bacilli appeared in his sputa; after removal from the ward the bacilli disappeared.

Doctor J. E. Westgate: I recently attended a street-car driver who had contracted a heavy cold, but instead of taking advice and leaving work, continued to expose himself during severe weather. Death from phthisis was the result. This case proved that the disease can be contracted without special predisposition, and also that occupation has a great deal to do with the liability.

Doctor R. H. Honner: There seems to be a popular belief that a "cold" is one of the most frequent causes of phthisis. The cough, that seems to be a precursor of the disease, is often a symptom of it, and not the cause. Failure to make an early diagnosis leads to the mistake. An attack of bronchitis cannot leave the lungs more liable to be attacked than pneumonia or pleurisy, and yet these diseases are not so often assigned as a cause. The experience of every physician proves that heredity is a very common predisposing cause. One member after another of certain families will contract the disease, even when prevented by distance from communicating it to one another, but cases enough exist to prove that phthisis can be taken by those who have no hereditary predisposition.

Doctor W. R. Gillman: I agree with the remarks of the other speakers that hereditary predisposition is one of the principal causes of the perpetuation of phthisis, and also that contagion is a cause of its dissemination.

Doctor J. T. Parker: While agreeing in the main with the remarks as to heredity, I think that exposure by constant attendance upon the sick, and occupations exposing the lungs to irritation, are other sources of danger.

Doctor Voorhees exhibited two specimens of biliary calculi contributed by Doctor Hal C. Wyman: One, about two and a half inches in diameter, composed of cholesterin and regularly laminated in structure, was taken from the gall-bladder of a horse; the other, taken from the alimentary canal of a patient, was about an inch in diameter.

Dec. 7th, 1893.

Doctor J. E. Clark reported a case of encapsulated biliary calculi of twenty years' standing. The patient, a man forty-five years old, complained of pain in the right side under the tenth rib. Examination revealed a large red nodule which showed the scars of healed-up sinuses, which had from time to time opened and discharged for the last twenty

years. Operation disclosed a cavity four inches deep, from which were removed ten gallstones, some of them as large as a hickory nut. They were enclosed in a capsule unconnected with the gall-bladder or liver. The patient made a complete recovery.

Doctor R. H. Honner reported a case of premature ossification of the fœtal cranium necessitating craniotomy.

Doctor E. B. Smith had found difficulty in diagnosing the presentation of the head by the position of the fontanelles and sutures. He agreed that the case reported by Dr. Honner was one in which craniotomy was indicated.

Doctor J. E. Clark also found that the diagnosis of presentation was much more difficult than the text-books made it appear. He cited a case in his own practice of forceps delivery that required such force that the blades of the forceps straightened out, but the application of a new pair succeeded in delivering the patient.

Doctor Wyman said that in cases where the face was anterior the bones were likely to be compressed into a position resembling ossification.

Doctor L. E. Maire exhibited fifteen cataracts which he had extracted from the eyes of adults and children. Those taken from the eyes of children were round, the others flat. In reply to Doctor Wyman, Doctor Maire said that the operation was successful in about seventy-five per cent. of the cases, and that failures are often due to intercurrent diseases.

Prevention of Diseases in the Public Schools.

Doctor Maire said that the spread of disease could be prevented by inspection, by isolation, and by disinfection. The schools should be inspected by physicians in the neighborhood. By this means, cases that are now often sick for days before the nature of the disease is ascertained could be discovered in time to prevent harm. Teachers should be taught more of hygiene, and with their increased knowledge timely interference on their part would do good. The Board of Education and the Board of Health should act in unison. The two boards have separate functions, and if each board performed the duties assigned to it there would be no clashing.

Doctor Smith thought that the physical development of children in the public schools was better than in private schools, but that the rooms were too crowded and the play-grounds too small. He favored giving the principals more power to inspect the children.

Doctor T. J. Parker believed that one cause of the spread of contagious diseases in the schools was the lack of strictness in physicians in placarding the houses of their patients.

Doctor Clark agreed with Doctor Parker that physicians are too lenient. Children should always be excluded from school when contagious disease is suspected. He thought it was the duty of the Board of Health to point out the defects of the schools, and the duty of the Board of Education to act on the information given. The inspectors sometimes reported noxious gases, but, unless they were actually found escaping from a sewer, he did not see the utility of condemning the drainage. He condemned the use of burning sulphur as a disinfectant, because enough was not used. Three pounds of sulphur to a thousand feet was the minimum amount, but good authorities claimed that effective disinfection could be attained only by the use of ten pounds to the thousand feet and an exposure of twenty-four hours. According to these figures, half a ton of sulphur would be required for a room in which only 48 lbs. had been used. Solution of iron is also valueless, particularly when only sprinkled over the desks covered with slates. Effective inspection is not feasible, as the inspectors should be medical men and the expense of employing them would be too great. Crowding, which is hard to avoid, is only relative and determined by the ventilation.

Doctor Wyman said that the principal cause of infection in the schools was the congregation of large numbers of children in one building. Until the schools are made smaller, no amount of sanitation or disinfection will prevent the spread of disease. Another cause is inefficient inspection, which is mainly under the control of the parents, as doctors are generally called in late or not at all.

Dec. 21st, 1893.

Doctor O. S. Armstrong presented a paper on "The Therapeutics of Diphtheria."

Doctor J. R. Kestell: The mortality of diphtheria can be ascribed to the sequelæ and to neglect in keeping up the strength of the patient. Bichloride of mercury stands preeminent in combating this disease. The burning of sulphur in the sick-room should be condemned because the vapors are poisonous and the patient requires the purest air. The vapor from slacking lime assists in dissolving the membrane, but the membrane should never be forcibly removed, as the raw surfaces thus produced serve only to furnish fresh points of invasion. The patient should be fed by the rectum with peptonized foods, the strength should be kept up with stimu-

lants, the room thoroughly ventilated, and the patient bothered as little as possible.

Doctor A. Stewart: The practice of forcing a child to take medicine is useless and dangerous. Another dangerous practice is the forcible removal of the membrane. Malignant diphtheria is a more complicated disease than the milder forms and is probably one disease superimposed upon another. I never had any trouble in combating the disease when called in early. The administration of salicylate of soda will check some cases when given soon enough. It is difficult to draw the line between diphtheria and simple sore-throat.

Doctor J. F. McPherson: I like bichloride of mercury, sulphide of calcium, and vaporized eucalyptus, but peroxide of hydrogen stands at the head of the list. I have found the pain in stomach complained of by some patients aggravated by the internal use of peroxide of hydrogen. I was once attending a case when an abrasion on my hand became infected; there followed slight constitutional symptoms and a rash on the body, which soon disappeared. This suggested to me that immunity might be induced by inoculation.

Doctor T. J. Parker: Care should be taken to remove loose pieces of membrane from the throat, as there is danger in swallowing them. The internal use of peroxide of hydrogen might counteract this.

Doctor E. T. Milligan: Diphtheria is the only contagious disease that is on the increase. Authorities claim that the disease is first local, then constitutional, but the fact that constitutional symptoms sometimes appear before local deposit tends to prove that it is a constitutional disease. For the certain diagnosis of diphtheria a part of the membrane should be removed with a sterilized platinum wire and placed in sterilized serum. The spores of the bacilli will appear in eighteen hours. Bichloride of mercury is a strong germicide, but it is a question if we can safely give enough to kill the bacilli. The percentage of successes with intubation is 26⅔, and with tracheotomy 26½.

Doctor L. E. Maire: When the disease originates in the nose, early diagnosis is difficult, and discharges from the nares with constitutional symptoms should be looked upon with suspicion. I use peroxide of hydrogen both internally and locally, injecting it into the nose in nasal diphtheria. As a stimulant I use plenty of whiskey, but I never feel like depending on bichloride of mercury. Some years ago the favorite treatment was calomel in large and often-repeated doses. I followed this treatment once with recovery as a result, but the child was severely salivated.

Doctor J. F. Bennett: I use peroxide of hydrogen, swabbing the throat every half-hour in severe cases; it has never caused irritation of the throat, but I have known the internal use to irritate the stomach. I have used Weld's Syrup of Iron Chloride with good results and without the disagreeable effects of the tincture. Children will generally resist all treatment, but this should not excuse non-interference.

Doctor J. S. Dean: The throats of children are often found affected before they complain of symptoms, therefore they should be examined frequently. There are two periods of fever in diphtheria, first the initial fever and then the septic. To ascertain if peroxide of hydrogen is irritating to the stomach, I once experimented on myself, but found that it produced no irritation.

Doctor C. Henri Leonard: The irritation produced by peroxide of hydrogen is probably due to the liberated oxygen. On account of the affinity of oxygen for metals, it should never be given in a metal spoon. I believe that intubation is the best surgical means, for although the percentage of successes is about the same as with tracheotomy, yet the cases selected for intubation are generally graver and have less skilled attendance and worse hygienic surroundings.

Doctor James Newell: The presence of false membrane does not make the diagnosis of diphtheria certain. Bacilli have been shown to be absent in 25 per cent. of these cases. This proves that there are at least two diseases of similar appearance. Chlorine-water prepared freshly from chlorate of potash and muriatic acid has proved a good germicide in my practice. Epidemics produce a larger percentage of malignant cases than are found among isolated cases. I have had as good results without the use of iron as with it. Peroxide of hydrogen appears to be somewhat of a fad, and I have known it to be used where cleanliness was neglected. A spray of carbolic acid and lime-water has given me good results. The use of alcohol as a stimulant is often excessive, and must do harm if pushed to the point of intoxication.

Doctor McPherson: It is almost impossible to intoxicate a diphtheritic patient.

Doctor Bennett: I have found peroxide of hydrogen particularly useful in cleaning the nose when it was so stopped up that other means failed to make a passage through to the throat.

Doctor R. H. Honner: Peroxide of hydrogen seems to be a revival of the oxygen treatment once in favor. Its renown as a pus-

killer seems to be established, but I cannot see the utility of its internal use unless it has an effect on the septic material swallowed. Bichloride of mercury has been assigned the highest value as a germicide, but its internal use is alterative and not germicidal. Germicides are less efficient when applied to bacteria imbedded in false membrane than when free in culture media. The administration of alcoholic stimulants is too often left to the judgment of the attendants, and consequently we find at times that the patient has been stimulated to a point of undue exaltation, to be followed by inevitable depression. At these periods of depression the heart fails. Alcohol should be given with systematic regularity, so that each dose is given before the effect of the preceding one has passed off. Applications should be made to the throat after milk or nourishment is given, and not immediately before.

Doctor E. B. Smith: If physicians were required to send a portion of the false membrane to the Board of Health for bacteriological examination, a diagnosis could be made within twenty-four hours. Applications to the throat are often too harsh. Alcohol is valuable in preventing septic fever. Tracheotomy is not a hopeful operation in laryngeal diphtheria.

R. H. HONNER,
Secretary.

DEATH OF JOHN TYNDALL.

We record with deep regret the death of this distinguished scientist at the ripe age of seventy-three years; the event occurred in the village of Hasemere, Surrey, on December 4th. Professor Tyndall had been suffering from pain and loss of sleep, for which he sometimes took an anodyne and hypnotic, and the occasion of his demise was an overdose of chloral inadvertently administered by his wife under the supposition it was a less potent medicament.

Few of the eminent names in literature are more familar or held in higher esteem than that of Tyndall. He was a man of enlarged and independent views, to which his high position gave weight and force with the public, both lay and scientific As a writer and lecturer he had the remarkable gift of being able to communicate information in the most simple, clear, concise, and attractive manner. He was a Rumford medalist of the Royal Society, and a member of various scientific bodies. He was made LL.D. of Cambridge in 1855, and LL.D of Edinburgh in 1866.

The Medical Age.

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Editorial.

THE CONTROL OF PROSTITUTION AND THE SPREAD OF VENEREAL DISEASE.

Recently has been published a paper upon this subject, from the objective standpoint of practical medicine, by Pontoppidian, of Copenhagen. With the aid of statistics he shows that since the rigid control instituted in the capital of Denmark, in 1886, venereal diseases (notably syphilis, and particularly in women) have materially diminished. He adds, moreover, that there has been a marked decrease in these disorders among the military; that of the garrison of Copenhagen, sixty-four men were unfit for duty on account of syphilis in the year 1885, while four years later the number had fallen to twenty-two.

The general statistics obtained are compared with those of countries in which control of prostitution has been suspended, as in Italy, for the last four years. According to the communications of Italian physicians, since such suspension venereal diseases have been greatly extended, especially among soldiers. In the year before abolition of control, 4.25 per cent. of the army suffered from venereal disease, while in the succeeding year the proportion had increased to 10.23 per cent. Like results are cited as having occurred in Norway since the abandonment of control in 1888: for this year the number of primary cases in Christiania was 182; the next year, 274; and in 1890 the total had increased to 473; likewise the number of fresh cases received in the hospitals of Christiania were, respectively, for the same years, 100, 140, and 243.

It is a well known fact that syphilis is upon the increase in America, where prostitution is practically unbridled in its license; and though not so rapidly fatal as many other maladies, it is more dangerous in that it is insidious, and its ravages not confined to the

individual, but ever threatening with all that he or she may come in contact with, and even to children of the third, fourth, and succeeding generations.

Indeed, if there was no other phase particular to this vice, control by the State should be demanded in America for the reason that here the bagnios are the shelter of the criminal classes, whereas in Europe they are shunned by such, owing to the fact all institutions of this class are constantly under police supervision and without either back entrance or side exits.

In a choice between two evils, one naturally turns to the lesser, and those members of society who are not swayed by fanaticism and "rule-or-ruin" sentiments have long recognized that a license law presents the only definite and satisfactory solution of the problem. The plea that control "tends to render vice respectable," which is so constantly reiterated, is both specious and puerile. Vice can never be respectable, since when it attains the latter status it is no longer vicious; further, vice is made more respectable by being left alone than when subjected to control that designates it as both vicious and criminal.

At present also there is no way of saving the unfortunates who recruit the class of prostitutes in this country, while, per contra, under legal supervision, in France 30 per cent. are rescued from a life of continuous shame, and upwards of 20 per cent. subsequently marry and obtain good homes.

POISONING BY EXTRACT OF MALE FERN.

In the *Norsk Magazin for Lægevidenskaben*, Doctor Paltauf records three cases of poisoning by extract of male fern.

First. An adult male received a decoction of pomegranate root and extract of male fern, in the proportion of one and one-half drachms of the latter, when he was seized with vomiting and violent colic, followed speedily by signs of cardiac weakness, dyspnœa, and cyanosis; the pupils remained contracted. In about twelve hours after administration, spasms set in, with confusion of senses, and six hours thereafter he died – the decoction of pomegranate could not be considered a factor in the poisoning.

Second. A woman, thirty-six years of age, ingested six grammes of male fern, and speedily became so weak as to be forced to take to her bed; soon she became collapsed, and in spite of all treatment died in forty-five hours.

Third. A woman of sixty, after taking ten grammes extract filix-mas, was attacked with dangerous collapse, with cold extremities, cyanosis, and tetanic spasms. This case likewise succumbed.

A dose of ten grammes administered to a robust student of twenty years brought on repeated attacks of fainting with cyanosis and tetanic spasms, though he ultimately recovered. A dose of six grammes administered to a young woman induced violent vomiting, fainting, and spasms. Another case presented precisely the same phenomena as the last. Both of these recovered.

In this connection it may be well to recall the fact that in both the *Wiener Klinische Wochenschrift* and *Pharmaceutische Post* of 1890, Doctor von Hoffman reported a case of fatal poisoning as the result of administering ten grammes ethereal extract of male fern, in twelve grammes of purified honey, taken in four equal doses. In this case Professor Hoffman imagined the fatal effects were attributable, not to the general character of the male fern, but rather to the morbid condition of the patient's organism.

In 1889 M. Freyer, in the *Therapeutische Monatshefte*, reported a case of poisoning and seven years earlier another case appeared in the columns of the *Lancet* (London).

According to Spencer Cobbold, jaundice has resulted from the administration of seven grains of extract of male fern, and mental aberration from 3.6 grains given to a boy seven years old.

Apping observed in his own case, as the result of one drachm, eructations, cold perspiration, dizziness, trembling of whole body, vomiting, diarrhœa, and finally insensibility lasting about an hour.

As the result of twenty grammes H. Mencke discovered albumen and cylinders in the urine.

Freyer, after giving seventeen grammes each of extract of male fern and extract of pomegranate, to a woman of twenty-seven,

observed vomiting, unconsciousness, and deep sleep lasting thirty hours.

As a matter of fact, some two-score of cases might readily be cited to show the commercial extract of male fern is not so innocent a preparation as has heretofore been believed, and that its action deserves further study. In this connection it may be well to recall the statement of Freyer, that not only the age of the plant is important, but also the consistency (or rather the vehicle) of the extract. He cites the fact that in the experience of Quirll, the extract rubbed up with olive oil acted more rapidly that the pure preparation.

Idiosyncrasy plays a great rôle in the action of most medicaments; nevertheless it is hardly possible that this will account for the striking phenomena observed on various occasions when the drug has apparently proved toxic. It is therefore apparent that a closer study of male fern is demanded. It may also be well to call attention to á fact upon which Doctor Heger lays great stress, viz., the importance of agitating the container which contains ethereal extract of male fern prior to dispensing. He remarks:

If a container of ethereal extract of male fern is allowed to stand quietly for a considerable time, and the extract is sent out without shaking, the last ten grammes of this extract must contain also the whole quantity of filicic acid which was at first evenly distributed throughout the extract.

For example, in a bottle containing 200 grammes this would impart a twenty-fold activity to the last ten grammes if the filicic acid be completely deposited. This is not to be taken for granted, but in such event 4 grammes of this extract residue might develop a toxic action, while 20 grammes of the first layers of the same extract would scarcely effect the expulsion of a tape-worm. The individual constituents of male fern, and particularly the filicic acid, should accordingly be made the subject of further investigation.

Perhaps it will be more desirable to discard the male-fern extract altogether and use the pure filicic acid; but this is a question which will have to be determined by investigation, since the action of filicic acid in the human economy is a matter only of surmise coupled with considerable doubt. It is especially desirable that the proportion of the active ingredient be more frequently determined, and that the individual constituents, viz., ethereal and fatty oil, resin, filico-tannic acid and filicic acid, be isolated in order that investigation respecting their action may be instituted.

CERIUM OXALATE.

Cerium Oxalate, which was introduced by Professor J. Y. Simpson in days past, has been resorted to in obstinate cases of vomiting in pregnancy, with remarkable success. Doctors Charlton and James have frequently reiterated: "It very seldom fails when given in doses of one-half to two grains."

Latterly the drug has fallen somewhat into disrepute, which is doubtless due to the fact that it has been little understood, and that owing to this misunderstanding the doses administered have been too small to assert a definite effect; also that, as it is obtained as a precipitate by the addition of a solution of oxalate of ammonia to a salt of cerium, this to the unchemical mind carries with it a suggestion of a compound of toxic properties. Such, however, is not true: in fact, the salt is so innocuous that it has been employed as a substitute for bismuth, in equally large doses, and in the majority of instances proves even more efficacious—subnitrate of bismuth often provokes nausea by its weight.

Again, cerium oxalate is both sedative and tonic to mucous membrane, hence efficacious in all maladies where there is irritation, either as a result of local inflammation, or due to reflex causes, throughout the entire length of the *prima viæ*. In chronic intestinal eruption, an incurable and intractable disease in which arsenic and nitrate of silver have long enjoyed the reputation of being efficient, oxalate of cerium may be employed with marked advantage; also, in irritable dyspepsia attended with gastrodynia, pyrosis, and chronic vomiting, its exhibition is usually satisfactory, though in the latter instance, as in the vomiting of pregnancy, the dose should be anywhere from five to ten grains, when oftentimes its value is enhanced by the addition of minute doses of ipecac.

From the fact that cerium oxalate proves a satisfactory remedy in most cases where nitrate of silver is generally employed, and

that it is moreover a tonic and sedative that may be administered freely without any danger of discoloration of the skin, it would be well if the drug were given thorough trial in the treatment of epilepsy, chorea, and other allied convulsive diseases.

DYSENTERY AND POMEGRANATE-ROOT.

Doctor Graeser, corroborating the statements of Doctor Gebke, writes to the *Deutsche Medizinal-Zeitung* that Pomegranate Root is most active in controlling dysentery. In thirty severe cases, both acute and chronic, he obtained uniformly excellent results by administering a teaspoonful every two hours of a preparation made by macerating 150 to 225 grains of the bark of the root in a bottle of French wine. Meantime attention was paid to the dietary—raw ham, thick soups, eggs and potatoes, and rice with boiled chicken, being allowed; to overcome thirst, ice with or without a little spirits was permitted.

Patients, previously in the most decrepit condition, with cold, clammy skin, feeble pulse, pronounced tenesmus, colicky pains, cramps in the calves, and who were sleepless and apathetic, Graeser declares speedily exhibited striking improvement, and even in so short an interval as four or five days. The tormenting tenesmus and colicky pains were mitigated; the frequently prevailing sphincter-paralysis was overcome; and the evacuations, often as many as sixty per day, passed drop by drop with abundance of bloody mucus, quickly assumed a more solid character.

MICTURITION, DEFÆCATION, AND TEMPERANCE.

An item is going the rounds to the effect that some $15,000 is spent daily over the bars of liquor shops in New York City alone, solely to obtain the privileges of a urinal. That this is a gross exaggeration must be apparent, as it means an expenditure of one dime for every tenth inhabitant; still there is enough of truthful embodiment to provoke the inquiry: How many contract intemperate habits through the neglect of municipalities to provide accommodations that in almost every civilized country except the United States are regarded as necessities? Perhaps a little practical temperance legislation based upon the foregoing might prove even more effective than crusades based upon fanaticism.

That there are no public latrines and urinals except in out-of-the-way situations, as parks and public buildings, and these usually unfit and of most noisome character, is to the shame of our boasted civilization. Every physician resident of a large city can bear witness to results, often of most painful character, that had their origin in, and are directly traceable to, lack of provision for relief through acts of nature. Especially unfortunate are elderly people and children, in the former of whom the diseases peculiar to age are often aggravated, while in the young is laid the foundation of vesical and rectal weakness, to say nothing of more remote disorders. We have even known the aged to be arrested on criminal charges for acts which they could not control under such cir cumstances.

All the hyper-delicacy that now is made to hide the subject of providing convenient public latrines for both sexes, is entirely uncalled-for—is "more nice than wise." Such accommodations might, moreover, be made self-supporting; in fact, would be better so, since in no other way, save by special tax and appropriation, could satisfactory service be rendered in the way of convenience, cleanliness, etc. Every latrine should have a lavatory attached; and few, we fancy, would grudge the small fee necessary, and that is now too frequently diverted to swell the coffers of dram-sellers and confectioners and other small shopkeepers. It is the former that are patronized by males, the latter by women and children, and in neither case is the accommodation suitable or adequate; and to ladies especially the common shop resort is obnoxious, and avoided save as a *dernier ressort*.

CEREUS GRANDIFLORUS.

C. Givelli, as the result of various experiments, believes the tincture of Night-blooming Cereus, 50 to 200 drops *per diem*, may be persisted in for a long period without inconvenience; no symptoms of intoxication are induced. He adds that it exerts a favorable action on the circulatory apparatus,

which may be explained by its regulation of the pulse; it promotes diastole, and diminishes peripheral resistance.

The therapeutic effects obtained, however, are not persistent or of long duration, being proportionate merely to administration. In organic affections of the heart, excluding grave cases of arythmia, when it is desired to obtain prompt action, and when other cardiac remedies have proved futile, it is most effective; and it will likely be found equally useful in functional troubles, regardless of the cause—particularly those of nervous origin. It matters little whether the remedy be taken before, during, or after meals, but the opinion is expressed that its action seems to be somewhat better when administered on an empty stomach.

Experiments in the clinic of Professor Bozzolo seem to demonstrate the efficiency of *Cereus Grandiflorus* in mitral and aortic insufficiency, in mitral stenosis, and likewise in exophthalmic goitre, rheumatism, chorea, and mild anæmia.

THE TREATMENT OF WHOOPING-COUGH BY QUININE.

A recent number of the *Berliner Klinische Wochenschrift* contains an article by Doctor P. Baron, who revamps the treatment of whooping-cough by quinine, which was highly lauded in the United States more than twenty years ago, and which E. Ungar attempted to revive some twenty months since in Belgium.

The claims of Doctor Baron are apparently borne out by a record of fifty cases, and he speaks in the highest terms of the virtue of quinine, and of its peculiar and unsurpassed potency in all cases of pertussis presenting acute pulmonary complications. He especially emphasizes the action of the drug in rapidly mitigating the paroxysms and in rendering a fatal termination exceedingly rare. The results in three cases of which he gives details, if really attributable to the drug, are certainly most remarkable evidences of the rapid and effective action of quinine.

Whether the remedy would likewise exert a prophylactic action on the complications of the disease, is a question which Doctor Baron suggests, but in the absence of sufficient clinical material does not attempt to answer; but he holds it would be well worth the trouble of ascertaining whether this is a fact.

The following is his exact mode of administration: Quinine muriate, gramme 0.01 per month of age, and gramme 0.1 per year of age, thrice daily, preferably at 6 o'clock in the morning, 2 o'clock in the afternoon, and 10 in the evening. He remarks a dose greater than that proportioned to the age must be given to nursing children that are especially robust; but more than gramme 0.4 thrice daily is not in general necessary for children more than four years of age, however robust.

When the symptoms have been distinctly mitigated, he recommends a reduction in the quantity—that is to say, he gives the quinine twice a day for a period, after which the doses are tentatively diminished, and discontinued in the evening only when cure is almost perfect. Where there is febrile excitement the quinine muriate is followed by a weak solution of hydrochloric acid. Where there is great nausea the drug is administered in connection with an effervescing powder. Withal, he endeavors to impress the fact that benefit from the administration of quinine will ensue in this malady only after the lapse of several days, hence its discontinuance should not be suggested until all opportunity for improvement has positively passed.

MUIRA-PUAMA.

This drug, which recently formed the subject of a lecture before the Berlin Pharmaceutical Society, has also been reported upon to the Therapeutic Society of Paris by Rebourgeon, who declares he analyzed specimens of the drug according to Dragendorff's method, and found an ethereal oil, a crystallizable substance which reduces Fehling's solution, tannin, phlobaphen, pectin, and other organic substances; physiological experiments disclosed slight toxicity. He holds it evidenced that the remedy would be useful in combating nervous debility, particularly when accompanied by digestive asthenia; also for the relief of difficult menstruation and impotence.

It is somewhat strange, since Parke, Davis & Co. have for some time marketed a fluid extract of this drug, that it has not received

more thorough attention and practical investigation at the hands of the profession in the United States.

ITEMS AND NEWS.

Cobra Venom and Cholera.—

A. L. Sandel, M. B., Municipal Commissioner, Calcutta, and late medical officer to the local government, Bengal, declares the empirical practitioner in India has wonderful success in combating the ravages of cholera. "Case after case given up by the faculty as hopeless is taken up and successfully treated by him. . . . . I managed to elicit the fact that the powerful agent employed subcutaneously was a tincture of which the poison of the cobra formed the sole base. . . . Later, I discovered a woman in possession of a small supply of the tincture, and her success in treating cholera cases was, on a smaller scale, as striking as his.

"I could not help reviewing the astounding fact that many eminent medical men of this city repeatedly found in their practice that cases of cholera given up by them as hopeless were cured, provided a certain charlatan was called in and permitted to inoculate his mysterious counter-poison, yet not one thought himself called upon to investigate the subject. I am prepared to avouch, on the honor of a professional man, my thorough conviction of the repeatedly successful treatment of hopeless cases of cholera by the inoculation of the sufferer with cobra venom."

Cobra Poison in Mother's Milk.—

A Mahommedan beggar woman and her infant child (aged about one year) recently died in Madras. It would appear, says the *Times* of India, that the deceased woman was bitten by a cobra, and while in that state she nursed the child, which also died from the effects of the poison. With reference to this statement, Sir J. Fayrer says: "I think it quite probable. I long ago showed that the blood of an animal poisoned by cobra virus is itself poisonous when placed in the stomach. Nothing more probable than that the milk of a woman so poisoned should be poisonous to the infant, but is it quite sure that the infant did not die of some other cause?"—*British Medical Journal.*

The Harem in Modern Turkey.—

"Harem," in the modern acceptation of the term, merely means the private apartments, and these would be called by the same name even in a bachelor's establishment inhabited solely by men, but generally it is applied to every place intended for women. The end of the Turkish railway carriage, curtained off from the rest, is harem; so is the ladies' cabin on board ship, and the latticed gallery in a mosque. In the dwelling-house it is all that quarter inhabited by the wife and children and other ladies of the family; and here I may say, in passing, that very few Turks nowadays have more than one wife. The traditional Turk with his innumerable women no longer exists, except as a very rare exception, but the Mussulman has not sacrificed the advantages of the privacy granted him by Mohammedan law and custom.—F. Marion Crawford, in *Scribner's Magazine.*

The Old and the New.—

The Old Year laid upon the portals of the Past
A trembling hand,
And said, "Oh, let me die and be at rest
Within thy misty land!"
Then all the years that lived and died before
Reached forth, and drew the wanderer safe within the door.

The New Year laid upon the portals of To-day
A firm young hand,
And said, "Oh, let me come and live and work
Within thy shining land!"
Then all the years that are to be replied,
"This is your world," and drew the youth inside.

—Kathleen R. Wheeler, in *Lippincott's.*

Adulterated Beer.—

Doctor Anderson says that one of the worst adulterated articles in general use is beer. Instead of being a brew of malt and hops, it is often adulterated with cocculus Indicus, capsicum, ginger, quassia, wormwood, calamus root, caraway and coriander seeds, impure sulphate of iron, sulphuric acid, bitartrate and carbonate of potash, alum, ground oyster-shells, nux vomica, etc. These perhaps make a stronger beverage when mixed with water and two to eight per cent. of alcohol, and certainly yield a profit in the neighborhood of 1,000,000 per cent.—*Food.*

"Cerebrine," Again.—

If the Columbia Chemical Co., of New York, is guilty of mixing nitro-glycerin or allied substances to give physiological effects to "organic compounds," the profession should know it. The suspicion is grave when the chemist, M. Delafontaine, again declares he finds their products to thus be adulterated; and now Prof. Lehmann, a Philadelphia chemist of repute, corroborates. Prof. Lehmann gets reactions for boric acid, glycerin, nitrates and nitrites.—*Recorder.*

The American Medical Publishers' Association.—

The first annual meeting of this organization was held in Cincinnati December 4th last. By-laws and rules were revised and amended, and the Association adjourned to meet in Washington, D. C., in September, 1894. The officers are: Doctor Landon B. Edwards, Richmond, Va., President; Doctor J. C. Culbertson, Cincinnati, Ohio, Vice-President; J. MacDonald, New York City, Treasurer; Charles W. Fassett, St. Joseph, Mo., Secretary.

Abuse of Medical Charity in London.—

Much discussion has taken place recently in London regarding the abuse of hospital charity by persons not in need of free medical attendance. The interest in the question has been general, both within and outside the medical profession. Mr. Herbert Spencer says that thirty per cent. of the people of London are frequenters of the hospitals and dispensaries, and that most of them are able to pay their doctors.

The Amenities!—

"Our friend Love of the *Medical Mirror*, who generally finds words of praise for everybody, including a host of new and proprietary preparations, seems at last to have found one morsel a little too tough. He names him *Rhoveyreed*. Bro. Love, we think, is aiming at Dr. R. Harvey Reed, of Mansfield, O., and it is a pity, too, for Dr. Reed is not a bad man, though he may have opinions of his own."—*Southern Clinic.*

Sterility in the Male.—

Doctor Champneys asserts sterility in the male is ascribable to one of two causes: either to a defective *quality* of the spermatic cell—"failure of production,"—or defective *function* of both the spermatic and the germinative cell—"failure of exchange." He attaches great importance to the first cause, and believes gonorrhœa plays chief rôle in the ætiology of sterility in man as well as in woman.

A New Veterinary Magazine.—

The initial number of a new journal, devoted to comparative medicine and veterinary therapeutics, has made its appearance in Philadelphia, from the press of the Avel Printing Co., 3608 Pine street, under the title of *The Veterinary Magazine.* It is edited by Doctor Simon J. J. Harger, V.M.D., Leonard Pearson, Leo Breisacher, and J. W. Adams. The subscription price is $3.00 per annum.

"Burning Tree" of India.—

This is the Laportea, whose leaves and stems are covered with stinging hairs, after the manner of our own nettle, but of a far more virulent nature. It is stated that when touched the sensation felt is as of being burnt with red-hot iron, the pain extending over other parts of the body, and lasting for a fortnight. Should cold water touch the part affected, the pain returns acutely.

Dislocation of the Kidney.—

The evidence of renal dislocation is to be found in weight and drawing and pulling-down pains in the lumbar region, made worse by any jar to the body; there is also pain in bladder, and frequent urination; often constipation, vomiting, and foul breath. In women all the symptoms are aggravated at the menstrual period.

Ganja.—

This is said to be the title of a preparation of Cannabis Indica employed in India for preparing an intoxicating drink. The plastic *ganja* yields a tax of $2.50 per pound, and the consumption thereof amounts yearly to 5,000 pounds. The Indian Government therefore derives no small revenue from this source alone.

A New Medical Journal.—

We are in receipt of a copy of the *Tri-State Medical Journal* at the hands of its editor, Doctor James M. Ball. It is published in Keokuk, Iowa, and will be the official journal of the Tri-State Medical Society of Iowa, Illinois, and Missouri. The first number is well arranged, and gives promise of success.

Normal Liquids.—

I have always had a strong penchant towards the *Normal* preparations, because I have learned by long experience that they can always be relied upon with deliberate confidence, and find them, in point of fact, the very perfection of pharmaceutical art and science.—Joseph Adolphus, M.D.

The Frog in Therapeutics.—

The *Lancet* (London) says that among the country folk of Lincolnshire, England, there exists a common form of infantile stomatitis known as "the frog," from the fact the domestic treatment instituted consists in giving the child a very small frog in a muslin bag to suck.

"Dr. William A. Hammond and the Humor of Him."—

This is the way the *Western Medical Reporter* heads a most pointed article relative to the commercial astuteness of the Washington specialist who has recently gone into the proprietary-medicine business.—*Southern Clinic.*

Castration for Crime.—

The Kansas Medical Journal advocates castration as the proper method of dealing with all confirmed criminals of either sex. "It is humane to the criminal, besides is a certain and sure protective to decent society, and elevating in its moral tendency."

Foot-ball Accidents.—

The young man who dislocated his neck while playing foot-ball at Farmington, Conn., last month, died during the past week. This makes the fourth fatal case of broken neck from foot-ball this season.—*Boston Medical and Surgical Journal.*

Fairy Stories.—

With Doctor Hammond and the Pasteur Institute of New York both in the market selling testicle-juice-brain extract, etc., we ought to begin to hear some fairy stories of these wonderful animal extracts.—*Homœopathic Recorder.*

Twelfth International Medical Congress.—

The Russian Government has shown much interest in the meeting-place for the Twelfth International Medical Congress (1896). It desires that Moscow be selected, and promises to donate 50,000 roubles toward the expenses.

Peanut Flour.—

This has been introduced into Germany as an article of diet. It contains nearly fifty per cent. of albumen, and Nordlinger pronounces it "the most nutritious and cheapest food in existence."

The Royal College of Surgeons, England.—

This organization numbers, so it is said, something like 18,000 members, but is controlled by a select council of twenty-four, much to the disgust, it is intimated, of the majority.

The Alphabetical Society.—

A Society for the Prevention of Cruelty to Animals recently stopped a dog fight and then killed the dogs. Wonder what a debating society of dogs would make of it.—*Exchange.*

Dangers of Mineral Waters.—

In constipation the mineral waters tend to desiccate the mucous membrane of the intestinal canal; especially is this true of sulphate of magnesia and the magnesium salts generally.

Personals.—

Doctors Ochotine, Medwedeff, and Aristow, of the Russian navy, were made Chevaliers of the Legion of Honor during the reception of the Russian fleet at Toulon.

Honor to Whom Honor is Due.—

It was Madame de Staël, and not Ricord, who first said that the condom was "a cuirass against pleasure and a cobweb against danger."—*Journal de Médecine de Paris.*

The First Mohammedan Woman Physician.—

The first Mohammedan woman to practice medicine has recently been given a position under the Russian Government. Her name is Miss Bibi-Radya-Koudlouiarow.

A Timely Warning!—

The Texas Health Journal declares: "Hog meat and 'rot-gut' whiskey is gradually consuming the health, morals, and intellectual vigor of the American people."

Ancient Fecundity.—

Aristotle mentions a woman who had five living children at a birth four times successively. Menage tells of one who had twenty-one children in seven years.

Then and Now.—

"When I was young we prepared students for life; now we prepare them for examinations," is a bit of truth from Jules Simon.—*Medical Record.*

An Error in Diagnosis.—

The Cæsarean operation was performed a short time ago; but as there was no baby, the jury assessed the operators $2,000 damages.—*Recorder.*

The Truly Great.—

The truly great physician is one who never speaks ill of his medical brother. He is dead!—*Medical Record.*

Book Reviews.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 per year. The Lippincott Co., Philadelphia.

The complete novel in the January number is "The Colonel," by Harry Willard French, which is based on a romantic adventure in which the hero saves the heroine's life at sea; Gilbert Parker supplies the opening chapters of a serial story, "The Trespasser," which will run through six numbers of the magazine—it deals with a Canadian of high family, who comes from a wild and wandering life to take his rightful place in English society; "Frenchy" is a domestic tale by Molly E. Seawell; "A Mother and Her Boy," by George Morley, is a pathetic sketch from every-day life; "The Peninsula of Lower California," by J. K. Reeve, gives valuable information concerning a little known region; Julian Hawthorne, in "A Poet of Manhood," pays tribute to the memory of Daniel L. Dawson; especially interesting are Mrs. Sherwood's "Recollections" of Rachel, Fanny Kemble, and Charlotte Cushman; under the caption of "A Juvenile Revival," Thomas Chalmers celebrates the "Christian Endeavor" era; Frank Shelley writes of "Early Marriage Customs;" Charles Morris anticipates "The Twentieth Century;" in "Talks with the Trade" many queries of young writers are replied to. The poetry of the number is of unusual merit, being by Martha T. Tyler, Celai A. Hayward, Kathleen R. Wheeler, Edward Oldham, M. S. Paden, and the late Daniel L. Dawson.

THE OVERLAND MONTHLY. Price, 25 cents; $3.00 per year. Overland Monthly Publishing Co., San Francisco.

The *Overland Monthly* for January opens with a pretty bit of verse by Charles Warren Stoddard, illustrated by Walter. Then follows an article by Milicent W. Shinn, "Some Comments on Babies," full of amusing bits of child lore, and illustrated by a profuse display of striking pictures—such a "baby show" has never before been given by any magazine. Doctor Voorsanger, rabbi of the largest Jewish congregation in San Francisco, gives "A Modern Jewish View of Jesus of Nazareth," in which he discusses the query "Why Jews do not accept Christ," in a reverent and reasonable spirit. Captain Isaiah Bray, formerly master of the "Morning Star" missionary ship, tells of "Micronesia" and its strange peoples. A careful and appreciative estimate of William T. Coleman is given by A. S. Hallidie, who was vice-president when Mr. Coleman was president of the "Committee of Safety" that put down the Kearney riots. "Kaiana and the Shark-God," by Mrs. M. H. Closson, is a legend of Hawaii. The stories are many and varied: a curious tale by Leonard Kip of "A Witch's Cauldron;" a weird ghost story of an attempt to bribe a legislature; an exciting foot-ball narration; a story of a Texas cowboy and his subjugation by a little Mexican wife; and under the title of "The Rich Fool and the Clever Pauper," a complication between a typical club man and a soured newspaper writer. Poems, sketches, editorials, and reviews, are all tinged with the holiday sentiment, and all are of the *Overland's* usually high grade. It is a number that ought to make regular readers for the year of every person into whose hands it falls.

THE ATLANTIC MONTHLY. Price, 35 cents; $4.00 per year. Houghton, Mifflin & Co., Boston.

The short days and long nights of winter give quite sufficient reason for making the January number of the *Atlantic Monthly* strong in its fiction. Mrs. Deland's new novel, "Philip and his Wife," opens with the greatest promise and interest. Miss Jewett's story, "The Only Rose," has for its heroine a woman three times married. "Wolfe's Cove," by Mrs. Catherwood, deals with the taking of Quebec; Charles Egbert Craddock's "His Vanished Star" completes the fiction of the number. A. T. Mahan contributes a study of Admiral Earl Howe. J. H. Denison tells the story of General Armstrong's life. Miss Edith M. Thomas appears in another study of Nature, "From Winter Solstice to Vernal Equinox." Of uncommon interest are ten letters from Coleridge to Southey. "Talk at a Country House" is by Sir Edward Strachey. Professor Shaler says another word for the colleges in "Transmission of Learning through the University." The two poems of the number are of unusual charm.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 a year. Charles Scribner's Sons, New York.

The January number begins the fifteenth volume of this popular magazine. The first great fiction of the year is the serial "John March, Southerner," by George W. Cable, well known as the author of "Old Creole Days" and other Louisiana sketches; F. Marion Crawford concludes his pen picture of "Constantinople," which is picturesquely reinforced by beautiful illustrations from the pencil of Edwin L. Weeks; "Stories in Stone from Notre Dame," by Theodore A. Cook, is a description of those grotesque figures

adorning the pinnacles and niches of the great Parisian cathedral; Frederick Keppel, the well known print-collector, contributes an entertaining article upon "Sir Joshua Reynolds," which is illustrated with reproductions of some of the most famous portraits painted by that celebrated artist; the Honorable Robert C. Winthrop contributes a reminiscence entitled "Webster's Reply to Hayne;" a new name in magazine literature, though by no means unknown to the public, is that of John Drew, who chats pleasantly of the "Every-Day Life of the Actor;" a paper of especial interest to students of sacred history is the "Place of the Exodus in the History of Egypt," by A. L. Lewis. There are likewise short sketches by George A. Hibbard and Bliss Perry, and poems by Arthur Sherburne Hardy, W. G., V. T. Sutphen, and others.

THE NEW PETERSON. Price, 10 cents; $1.00 per year. New Peterson Publishing Co., Philadelphia.

The December *New Peterson* is in many respects ahead of all former months. The illustrations are more numerous and better than ever, being for the most part photogravures. The opening article, "The Land of the Liberator," is by M. McCarthy-O'Leary, and is a sketch of the Kerry District of Ireland, the home of Daniel O'Connell; "Figs and Thistles" is by Lucy H. Hooper, and possesses the additional interest that it is the last paper from this gifted authoress prior to her decease; "Puss in Boots" is by Agnes Repplier; "Pocahontas" by Alexander Brown, an exceedingly interesting paper by Virginia's noted historian; "Under the Southern Cross" is another charming paper giving a bird's-eye glimpse of different South American republics; "Helen," by M. G. McClelland, is as intense as it is realistic; "The Laziest Man in the Settlement," by Herbert Bashford, is both unique and pathetic; "The Fireside" contains papers by Minot J. Savage and other distinguished essayists; the "Book Reviews" are the best we have seen among the month's magazines.

MCCLURE'S MAGAZINE. Price, 15 cents; $1.50 a year. S. S. McClure (Limited), New York.

The January number is unusually attractive in illustrations and in reading matter, and one quickly recognizes the notable wealth of portraits contained, that of Parkman, the historian, being the frontispiece. An exceptionally interesting article is that by an ex-railroad engineer, Mr. C. Warman, who gives a vivid description of a ride on the "Exposition Flyer" from New York to Chicago. Scarcely less thrilling are some of the promises of progress in a series of predictions by Professors T. R. Huxley, Max Müller, and E. J. Houston, and by Archbishop Ireland and others of special authority in religion, science, and literature. Some hitherto "Unpublished Letters" of Whittier exhibit his faith in God and man most attractively. A view of "Jules Verne at Home," largely autobiographical, a biographical and critical study of Francis Parkman, and an account of the "Maxim Air-Ship," are also notable articles. W. D. Howells, G. W. Cable, Elizabeth Stuart Phelps, Professor Tyndall, and others contribute a series of reflections and mottoes suggestive of the new year. The short stories are by Gilbert Parker, Mrs. Louise Chandler Moulton, and I. Zangwill.

THE DELINEATOR. Price, 15 cents; $1.00 per year. The Butterick Publishing Co. (Limited), New York.

January is the "Winter Holiday Number," and an especially attractive issue, the fashions being appropriate to the season, and the reading matter varied and interesting. The distinct holiday flavor is contributed by an article entitled "What the Shops Show," and another reviewing the books issued for this season. "Household Renovation" deals with the cleansing of many articles and gives valuable information regarding suitable fluids. "Child Life" treats of training boys for business; "Physical Culture" continues the instructions given last month; "Small Economies" is particularly seasonable and of value to every housekeeper; much may also be gained from a second paper on "Things that Should be Left Unsaid." An illustrated article on "House and Street Gowns" is of general interest to ladies, and another appropriate to the times is "Fur Sets and Trimmings." "Tea-Table Talk" for the month is full of information, and offers an unusually attractive assortment of designs in tatting, knitting, crocheting, lace-making, etc.

ANNUAL OF ECLECTIC MEDICINE AND SURGERY. Volume IV. Cloth; 8vo; pp. 500. Edited and published by J. V. Stevens, M.D., Chicago, Ill.

This is the annual record of the Eclectics of North America, and is an attempt to gather into one volume the meritorious papers presented at the various State societies, thus preserving and forming a reference library.

The volume presents many papers of value to the general practitioner. Moreover the form, the style of type, and general arrangement, including a very thorough and comprehensive index, all tend to render it an available, practical work for the physician.

SURGERY. By Bern B. Gallaudet, M.D. Cloth; 12mo; pp. 291. Price, $1.75. Lea Brothers & Co., Philadelphia.

This volume marks the completion of the "Students' Quiz Series." It is not to be classed with ordinary "compends" or "summaries," but is an explanation of the principles and practice of surgery in terse style. It groups a large amount of information in very compact and convenient form. Moreover, it is well illustrated, there being about 150 cuts and engravings.

FUNNY BONE. By Dr. L. Crusius, Ph.G. Paper; 8vo. Price, 50 cents. The Funny Bone Publishing Co., St. Louis.

This, as its author announces, is a collection of "funny sayings, jokes, stories, dialogues, conundrums, ludicrous things, ditties, etc., with new and original comic illustrations, pertaining to the medical and pharmaceutical professions."

A SYLLABUS OF SURGERY. By N. Senn, M.D. Cloth; 16mo; pp. 220. Price, $2.00. W. B. Saunders, Philadelphia.

This book has been arranged in conformity with the author's "Text-Book of Surgery," and is intended to assist in the instruction as well as preparation of students for final examination.

A HAND-BOOK OF DISINFECTION. By E. T. Duke, M.D. Paper; small 16mo; pp. 50. Price, 25 cents. H. K. Duke & Co., Cumberland, Md.

This is an attempt to afford plain, concise, and practical instructions regarding disinfection, while avoiding the use of technical terms.

THE LIVING AGE. Price, $8.00 per year. Littell & Co., Boston.

The *Living Age* for the week ending January 6th begins a new volume, a new year, and a new series. After its successful career of fifty years, this standard periodical seems as vigorous and prosperous as ever. Always the chief, it is now the only eclectic weekly of the country. Its distinguishing characteristics are that it presents in convenient form a compilation of the world's choicest literature, encyclopedic in its scope, character, comprehensiveness, and completeness, and with a freshness, owing to its frequent issue, attempted by no other publication whatever; the ablest essays and reviews, the latest results of scientific research, biographical sketches, stories of travel and exploration, literary criticism, and every phase of culture and progress in the European world, making an amount of reading of the highest value, unapproached by any other magazine.

During 1894 the department of fiction will include, beside short stories, translations of representative French and German novelists. The first issue of the new year contains the opening chapters of a powerful serial, "Manette Andrey," a picture of life during the Reign of Terror, from the French of Paul Perret. A charming story, "The Numidian," from the German by Ernst Eckstein, will be given in early numbers. Other translations will follow.

The beginning of a new volume is an excellent time to begin a subscription, and this more than usually so, as it is also the beginning of a new series which will form a complete work of itself, all serial matter being completed with the last numbers of the previous volume. Some acquaintance with foreign periodical literature is an absolute necessity to every one who desires to keep abreast of the world of thought, to be in touch with the best results of the intellectual activity of the times; and in no other way, that we know of, can this be so satisfactorily, cheaply and conveniently secured as through this brilliant weekly magazine.

AN OLD FRIEND.—In a series of interviews with members of the last Congress, thirty-one out of forty-three remarked that they were readers of *The Youth's Companion*. For definite and trustworthy information on the questions of the day it is really unique, while the high character of its stories, the wide fields covered by its special articles, and its contributions from the most famous writers in Europe and America, are well known.

Its programme for next year seems brighter than ever. Some of the important stories are: "The Deserter," by Harold Frederic; a Tale of the Great Mutiny in India, by Sara Jeannette Duncan; several Romances of the Sea, by W. Clark Russell; Tales of the War, and of the Frontier in Early Days. Henry M. Stanley contributes two thrilling narratives from Darkest Africa, and Archibald Forbes writes of his "Closest Call." Naval Battles are described by Admirals, and Military Life by Generals. Then there are articles on Choosing an Occupation, Boys Who Should Not Go to College, Physical Training, Recreations of all kinds, and many other practical subjects.

Another pleasant feature is the charming picture of a young lady of Colonial times, "Sweet Charity," reproduced in colors from a painting by Ferris, which is presented to all subscribers who send their $1.75 for a new subscription or a renewal.

A NEW VEGETABLE DIGESTIVE FERMENT.

Sigs. Daccomo and Tommasoti have isolated a new digestive ferment from *Anagallis arvensis* ("Shepherd's weather-glass"), a common weed in England and on the Continent. They were led to their researches by the fact that the peasants of Tuscany employ the bruised plant as a remedy for warts. The authors have tested and confirmed its action on raw flesh and on fibrin, and they isolate the fermentive principle by precipitating the fresh juice with subacetate of lead, decomposing the lead compound with sulphuretted hydrogen, and fractionally precipitating with alcohol. The ferment thus obtained gives, on drying, a white amorphous powder, with an odor recalling that of yeast. By its means fibrin is entirely peptonized in four or five hours.

Therapeutic Brevities.

Syrup Acid Hydriodic.—A reliable preparation should be perfectly clear, or of a very slightly tinted straw-color; sweet to the taste and not irritating; without acrid odor; absence of iodine reaction with starch; absence of fermentation; syrupy in consistence, and palatable to the taste. Dark-brown preparations are worthless, unsatisfactory, irritating, nauseating and dangerous, and must be condemned at once. Fermentation destroys its efficiency by liberating free iodine and hydriodic acid, which is a gas. Any preparation which has stood for a length of time exposed to the air, heat, or strong light should not be used. Small, dark bottles, hermetically sealed, are preferable to large ones, unless the syrup is used within a short time—this is especially the case in hot weather. It should not be dispensed in large quantities, and is best given in its pure state (to be mixed with water when taken) rather than in combination—combinations are liable to undergo changes more rapidly than the simple drug.

A large number of failures with syrup of hydriodic acid have been traced by the author to the use of improper preparations. Good syrup hydriodic acid is palatable, does not irritate the stomach, can be given in small bulk, is not objectionable to children, and does not contain objectionable materials. Iodide of potassium makes a nauseous dose, large in bulk, and hard to administer; and potash also irritates the kidneys. Hydriodic acid will produce the same physiological effects as any other preparation of iodine, and will cause coryza, ptyalism, skin eruptions, and anæmia, if pushed in amount. It is indicated in tertiary syphilis in all its forms; in strumous diathesis and its various manifestations; rheumatism; eczema—in fact, it is to be used internally as any other iodide.—Doctor W. B. Stewart, in *American Therapist.*

Treatment of Cancer.—Doctor Charpentier, in the *Aerztl. Rundschau*, relates a case in which a few months after the breast had been amputated for sarcoma, there developed in the arm of the same side a tumor extending from the olecranon almost up to the shoulder, with œdema of the hand and violent pain; a few nodes had also formed in the old cicatrix. As the patient obstinately refused further surgical interference, the following treatment was instituted:

An ounce of Fluid Extract of Rumex was instilled in nine times its bulk of water, and two teaspoonfuls ordered taken three times daily, at the same time one-quarter teaspoonful of a mixture of Fluid Extract Phytolacca, diluted with 2¾ drachms of water. The following ointment was ordered applied to the tumor twice daily:

℞ Fluid ext. phytolacca, 1 drachm.
Fluid ext. rumex, 2 ounces.
Yellow wax, 1 ounce.
Benzoinated lard, 3 ounces.

As a result, after one month the scar became free from nodes, and the tumor on the arm had disappeared save for a slight thickening of the integument; and moreover the woman gained fifteen pounds in flesh.

Freckles.—Doctor Robert B. Morison, of Baltimore, advises for the removal of freckles:

℞ Corrosive sublimate, 7 grains.
Distilled water, 6 ounces.
Spirits camphor, 4 drachms.
Rose-water, 5 drachms.

Apply upon three or four thicknesses of linen, cut to fit, at night. Remove when dry.

After a few nights, redness of the epidermis is induced, when it peels off in fine scales; then may be used an ointment composed of:

Spermaceti, } each 7 parts.
White wax, }
Oil of sweet almonds, 14 parts.
White precipitate, 1.4 parts.
Salicylic acid, 1 part.

Rub this on, night and morning, for five minutes, with a clean finger.

Doctor Morison considers this satisfactory treatment, and that the return of the freckles can usually be prevented.

Medicated Glycerin Suppositories.—Kohlstock, in Senator's clinic in Berlin, made some experiments with hypodermatic and rectal introduction of such vegetable products as Aloin, Colocynthin, and Citrullin (colocynthidin) as purgatives, and he states that the rectal application was especially successful in connection with the glycerin suppository as a base. There was no irritation induced; on the contrary, the action was agreeable, pain being seldom felt; no inclination to constipation was ever left through their use.

These experiments were repeated in different clinics in Vienna, with same results. The strength of the suppositories generally used was one-half gramme *pro dosi* for aloin, three centigrammes for colocynthin, and two centigrammes for citrullin—the two latter being especially prescribed in obstinate cases.—*British and Colonial Druggist.*

Fluid Extract of Ustilago Maydis.—Doctor Blair draws attention to this drug as one which far excels ordinary ergot as an aid in

tedious labor. He has employed it in numerous cases with most satisfactory results, in doses of from twenty to thirty minims; and his general conclusions are:

In those cases in which the pains were continuous, the effect was to render them intermittent and more easily borne. Where natural labor pains were present, the drug increased uterine contraction and hastened labor; the results were more favorable after considerable dilatation of the cervix had taken place, though action was tested at all stages. In no instance were there any bad effects.—*The American Doctor.*

Esencia de Coca.—Coca has maintained its reputation as a powerful nerve-stimulant, being used with good results in nervous debility and the opium and alcohol habits. The highly variable character of the commercial drug makes it, however, uncertain as to activity. The Esencia de Coca is a uniformly active article, prepared from assayed leaves, the percentage of cocaine being always determined. This preparation has of late obtained unusual reputation in the convalescent treatment of dysentery, diphtheria, typhoid, and other diseases in which there is lack of assimilative digestive power. Particularly effective is its action in stimulating and restoring gastro-duodenal digestion.—*Lancet.*

To Relieve Pigmentation of Pregnancy.—

℞ Oxide of zinc, 4 grains.
Yellow oxide of mercury, 16 grains.
Castor oil, } each 28 drachms.
Cacao butter, }
Attar of rose, 10 minims.

Apply this ointment twice daily—some to be allowed to remain on at night.—*L'Union Médicale.*

Convulsions in Children.—These may frequently be cut short like magic, by turning the patient on the left side. It is also said that the nausea resultant upon chloroform or ether narcosis may generally be controlled in the same manner.—*Exchange.*

Habitual Abortion.—Doctor Pasquinet, of Lille. France, reports to the Société de Thérapeutique that he has found Fluid Extract of Black Haw efficient not alone in preventing abortion and miscarriage, but a remedy against abortive tendency.

Amenorrhœa.—The *Eureka Springs Medical Journal* declares that "two-grain pills of permanganate of potash" (Parke, Davis & Co.'s preferred), three or four times daily, are a most efficient remedy for this disorder.

Medical Progress.

THE USES OF "ORGANIC EXTRACTS."—Between such organs as, for example, the brain and the thyroid gland, there are many and great differences. One of these differences is all-important: The thyroid gland is a secretory organ; the brain is not. Without entering into a discussion of the exact nature of the process, concerning which the evidence is not clear, it is sufficient to know that clinical and experimental observations are at one in demonstrating that the thyroid gland manufactures some substance which, by its function in the economy, prevents the occurrence of the symptom-complex termed myxœdema or cachexia strumipriva. The principle is exactly the same as that upon which we administer pepsin or pancreatin to replace the natural pepsin or pancreatin in digestive disorders; the body failing to furnish a certain substance which is necessary to the proper nutrition of all the organs, we supply that lack by administering a similar substance obtained from animals.

In will be observed, moreover, that whatever it may be that is accomplished by the administration of thyroid extract, it is not the cure of disease of the thyroid gland. No one, surely, expects to cure disease of the peptic glands by giving pepsin, or disease of the pancreas by giving pancreatin. Cure can only be obtained by measures which will secure natural reproduction of the missing secretions.

The brain, so far as we know, secretes nothing physical; so far as we know, there is no symptom or symptom-complex which can be attributed to defect in any supposed secretory function of the brain. Consequently, there is nothing in the whole nosology which, on theoretic grounds, the administration of brain extract could be expected to remedy. Similarly, the heart, so far as we know, secretes nothing, and there is no symptom or symptom complex which can be attributed to default of supposed secretory function on the part of the heart. Equally, therefore, there is no ground for the administration of heart extract to remedy disorder caused by disease of that organ. For, let us remember, the thyroid extract does not cure thyroid disease, the thymus extract does not cure disease of the thymus, the pancreatic extract does not cure disease of the pancreas; and to expect brain extract to cure brain disease, or heart extract to cure heart disease, is on a par with the science of the Obi-doctor and the practice of the lizard-giving Chinamen.—Dr. S. Solis-Cohen, in *The Polyclinic.*

The Medical Age.

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Original Articles.

THE FORMS OF PERITONITIS, THEIR RELATION TO APPENDICITIS, AND THE ÆTIOLOGY OF EACH.*

BY ROSWELL PARK, A.M., M.D.†

If I venture upon this occasion to endeavor to interest you in a subject which has already been hackneyed, it is because I hope to be able to present it in a way not commonly adopted by writers on the subject. It is less with the symptoms and treatment of the various forms of local and general peritonitis that I care to deal than with certain features in its ætiology.

While every competent practitioner is expected to make a diagnosis of peritonitis, it has yet happened to me so frequently to find that they are misled, or at least that they have overlooked the primary development of the local focus of infection or inflammation at the site of the appendix, from which the general condition has extended,—and that they have contented themselves with treating the sequel and neglected the primary condition,—that I have been tempted to take up the subject from this aspect.

In a paper prepared some time ago for the "System of Practical Therapeutics" edited by Dr. Hare (Vol. II, pp. 1015 *et seq.*) I have ventured to give a classification of various forms of peritonitis, which, if not original, is at least more comprehensive than any which up to that time had been found in the ordinary text-books or works of reference. Subsequent experience has served to confirm my impression that the classification therein given is satisfactory save in one or two regards, and it is with an amended presentation of the matter at that time presented that I shall first trouble you to-night.

I have ventured to classify the different forms of peritonitis in three ways: First, clinically; second, anatomically; and third, pathologically.

Let us take first the clinical classification, making the following divisions, according to authorities which have long been considered competent:

1. *Idiopathic Peritonitis.*—If there is anything which modern research has taught us regarding abdominal complaints, it is, I think, this: that there is no such thing as a purely idiopathic peritonitis. This term, therefore, must really be taken to mean an occurrence of the disease for which no known origin can be ascribed; in other words, the term "idiopathic" is a confession of ignorance concerning causes. This so-called idiopathic peritonitis is known, *e.g.*, in the course of Bright's disease and of scurvy. In the former there is undoubtedly a chronic toxæmia, and there is now very good reason for considering the latter to be a disease of bacterial origin, especially since the most recent observations of Babes. The exact relations of the various toxæmias to serous inflammations are not yet known, but it will be my purpose here to night to show that toxæmias of all kinds predispose to colon infection, or in fact to any other active infectious process. If there be such a thing as a true rheumatic peritonitis it is due to the unknown poison of rheumatism, be this what it may, and in that case is not idiopathic. Why in the course of acute rheumatism the peritoneum and pleura should suffer so rarely and other serous membranes so often, we do not know. Malaria may certainly cause congestive disturbances in the peritoneum, and these are frequently serious enough to call for active treatment, and may very easily predispose to active colon infection. The congestions and neurotic disturbances due to malaria yield to quinine, but an active, dis-

*An address delivered before the Wayne County Medical Society, Detroit, Mich., Jan. 17th, 1893

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tinct peritonitis due to malaria cannot yield to quinine alone, in my estimation, since such a condition is one of infection.

In times past among the forms of idiopathic peritonitis has been recognized a "menstrual" form in which probable exposure to cold plays a certain part, which if it go on to exudation and possibly suppuration must be positively due to bacterial infection.

2. *The Consecutive Form.*—This term has been applied where there has been evident inflammatory extension from certain parts, due to inflammation, and most frequently from the abdominal viscera. It appears furthermore that this extension takes place more often from the hollow than from the solid viscera.

For instance, it is much more common as an extension from the stomach, intestines, gall-bladder, uterus, or Fallopian tubes, than from the spleen, liver, kidneys, pancreas, or mesenteric lymph nodes. It is also consecutive to certain parietal inflammations, erysipelas, carbuncles, and burns of the abdominal wall. Less often it succeeds inflammations of the thoracic viscera: for example, pleurisy, pericarditis, pulmonary abscess, empyema, hydatid cyst, and even phrenitis. It may follow infectious embolism of the abdominal aorta; it may be consecutive to phlebitis, or periphlebitis of the abdominal pelvic veins; it comes on after infiltration from any cause. Further, the most common instances of consecutive peritonitis are met with after strangulation of the intestines, or obstruction from any cause, and also from the results of puerperal conditions. So far as the former are concerned, a small strangulated hernia, invagination of the bowels, or fæcal impaction producing obstruction, are usually favoring anatomical conditions. In any one of these instances the process consists first of stasis, then exudation, and then infection. Of the condition formerly known as puerperal peritonitis, it must be said that it is even more common after abortion or miscarriage than after delivery at term.

3. *Perforative Form.*—That peritonitis frequently ensues after the escape into the peritoneal cavity of any secretory or excretory material which Nature has intended to keep out of it, is well known. To this general rule there are, however, such exceptions as those for instance, when bile or pancreatic fluid escape into the general peritoneal cavity, and occasionally urine also. Such cases are for the most part fatal, although in rare cases the inflammation is circumscribed and recovery may ensue. Perforation may occur from the stomach, as in cases of gastric ulcer, and these are the cases where a localization of the inflammation is most probable; it most often occurs from the intestine. The majority of these cases are post-typhoidal. The disease assumes a fulminating type, and patients die very rapidly. It may be the result of post-dysenteric lesions, when there has been a membranous form of enteritis, in which there is formation of pus and sloughing of a portion of the intestinal wall. It may be the result of gangrene due to strangulation of the gut, with sloughing and a fæcal extravasation. When a hydatid cyst ruptures into the peritoneal cavity it nearly always causes acute peritonitis, its contents being absolutely toxic. Perforative peritonitis may also be the result of rupture of an ureter, this being usually due to the presence of a calculus; or to rupture of the bladder or gall-bladder, or of any abscess, for example pericœcal, in the neighborhood of this membrane. The onset of cases due to perforation is acute, and is followed usually by a sudden meteorism with profound collapse and speedy death.

4. *Traumatic Form.*—This combines all cases due primarily to trauma, whether the peritoneum has been penetrated or not. Violent, continuous pain in the abdomen is not infrequently provoked by it, while crushing injuries which produce rupture of the liver or of the kidneys are not infrequently followed by it. The most common injuries which produce it are, however, penetrating wounds, lacerated, punctured and gunshot.

5. *Chronic Peritonitis.*—This form is perhaps more often due to a condition of chronic Bright's disease than to any other one factor. It has but little in common with the acute form, perhaps nothing save identity of location. Ordinarily it is not an infectious condition nor the result of it. It is due rather to the constant irritation of some toxic agent. Anatomically it is characterized by a much thickened and opaque peritoneum within which, more and more, adhesions have

formed. The amount and extent of these adhesions in some cases are wonderful. Cases are on record in which all the viscera were so matted together as to be simply inseparable. (*Peritonitis obliterans seu deformans.*) This clinical form is characterized by the absence of acute manifestations and a tendency to fibrinous exudate which in time often forms adventitious membranes that later constitute separate cavities, all of which causes the peritoneum to appear larger and thicker than it really is. This appears to be noted most often about the liver, and it is worth while to remember that in cases of so-called peri-hepatitis the thickened condition of the liver is in a large measure due to this cause.

These new membranes may divide the general peritoneal cavity into a few or numerous chambers so that when the abdomen is opened it appears to be filled with cysts; inasmuch as fluid collects in each of these chambers the resemblance is more striking. It is characteristic of chronic peritonitis that the mesentery is not only shortened, but that the actual length, by measurement, of the intestine is diminished sometimes even by several feet, while its diameter is correspondingly contracted. This is the result of cicatricial or atrophic changes.

This form is nearly always accompanied by marasmus, which may be explained by the anatomical condition just alluded to and by more or less ascitic collection of fluid. It sometimes is very permanent. On the other hand the peritoneal condition itself is sometimes the result of ascites due to other causes, since the distension of the membrane by fluid seems to lead to chronic inflammatory processes in its texture. The former condition corresponds to the idiopathic dropsy of many of the older writers. From what has been said it appears that this form is not necessarily a chronic process, but may be the sequel of an acute attack.

6. *Tubercular Peritonitis.*—Like other tubercular lesions, this may be primary or secondary. The slow forms are distinguished by the condition of the peritoneum just described, *plus* the peculiar dotted or nodular appearance which tubercular deposits produce. In many of these cases, especially the slow ones, the lymph nodes will be found to have undergone caseous alteration. The abdominal cavity may contain serum, clear or turbid, pus or puruloid material, or recent or old blood, since hæmorrhage more frequently results from surface lesions. Tubercular peritonitis assumes sometimes a proliferative type and is characterized by numerous adhesions. It may be acute, in fact even as acute as tubercular meningitis, or it may follow a very slow and irregular course. Its symptoms are vague and obscure; its characteristics are those of general ill health, which later becomes pronounced marasmus accompanied by diarrhœa, especially if the intestines be ulcerated. Unless pus and fluid be present the abdominal walls are retracted. The signs of this condition are induration and nodulation of the omentum when it can be felt, *and reddening and thickening around the umbilicus*, which are due to extension along the obliterated umbilical vessels.

7. *Malignant Peritonitis.*—Less than one-half of these cases are really primary; the majority appear to be secondary. There is known a primary miliary carcinoma, but it is very rare; as a secondary condition it is less so. Circumscribed cancer of the peritoneum is known, and is met with occasionally. The abdominal cavity is filled with a mass of colloid material to which the name colloid cancer has been given, although it is really due to colloid degeneration of medullary carcinoma, or small round-cell sarcoma which is most likely to occur in the omentum. This form is characterized by mildness of symptoms, by a progressively downward course, sometimes by hæmorrhage which may prove fatal. Recent investigations make it probable that in every case of widespread cancerous disease a peculiar toxæmic condition is met with which is due to an unknown toxine produced by abnormal tissue changes.

8. *So-called Latent Form of Peritonitis.*—Every practitioner of wide experience meets with fatal cases in which pus or other evidences of diffuse or local peritonitis are found, but in which during life such a condition of affairs had not been suspected. Such instances are most common in connection with appendicitis. This so-called latent form is nearly always characterized by the presence of pus, and is simply an evidence of failure

in diagnosis, such failure being sometimes due to profundity of the toxic symptoms, sometimes to diversion of attention by other lesions, and sometimes to the fact that when pus forms very rapidly the exquisite sensibility of the peritoneum is lost. This latent form of disease deserves no place in pathology, and should be clinically classed only as a curiosity.

9. *The So-called Fœtal and Uterine Form.*—That congenital stenosis of the intestine may lead to fatal peritonitis has been shown by Virchow and others. It is usually readily fatal from the nature of the condition which primarily produced it. An inflammatory form has also been distinguished as occurring shortly after birth, and is for the most part really a form of consecutive peritonitis, being due to causes arising about the umbilicus, such as inflammation, lymphangitis, gangrene of the umbilical vessel, or umbilical hernia. It is for the most part of septic type, possibly even putrid.

I have given a clinical classification first, because hitherto it has been so generally regarded as important. It is based on external appearances, and these are notoriously often misleading. It is not a scientific classification, although I confess that it has answered a certain purpose in time past.

The anatomical classification is very simple. It is as follows:

1. *The General or Diffuse Form*, which has already been sufficiently considered.

2. *The Circumscribed or Localized Form*, which may merge into the first as congestion is excited, and exudate transplanted by means of the respiratory and peristaltic motions to which the abdominal contents are subjected. The most common examples of the circumscribed form are met with upon the bowels and about the cœcum. The traumatic form clinically is frequently represented by the circumscribed form anatomically, especially when of low grade. A very rare form of the disease is that which is limited to the cavity of the lesser omentum, and which is for the most part consecutive to disease of the pancreas. Virchow has also described a *peritonitis mesenterialis et omentalis*. Localized peritoneal exudate is also frequently due to fæcal accumulation and to the presence of cystic tumors which become infected and give rise to local as well as general processes of an infectious type.

Before discussing the pathological classification let me stop a moment and make a little clearer my position. It is my object to demonstrate that in reality there is no such thing as an idiopathic peritonitis. In order to do that, it is necessary first to maintain that peritonitis properly speaking is an infectious disease—in other words, a disease or a condition having a bacterial origin; in the second place, that for every case of this nature a path or at least a focus of infection must be made out; and third, that we are now in position to claim that *for all such cases when properly studied such path or source of infection can be made out.*

Were I addressing a less intelligent audience I might think it necessary to go perhaps further back, and show that all suppuration has its source in actual germ activity, and that all putrefactions are conditions brought about by bacterial action, and that consequently there can be no such thing as pus or suppuration, nor ichor, nor any putrid condition of affairs in the abdominal cavity, save those which are produced directly by some bacterium. Injection of merely irritating material into the peritoneum, so long as infection be prevented, may produce congestion, exudate, hæmorrhage, or even death of tissue, and yet not cause true peritonitis. Or, as is more often the case, such materials pave the way for subsequent infections, usually from the intestinal canal, and thus bring about a distinct peritonitis. But it is a part of my purpose here to maintain that mere congestion or innocent exudate does *not* bring about either the clinical signs of peritonitis or the pathological condition which is a part of the genuine disease. In fact, so completely protected are we, under circumstances of healthy surroundings by the natural properties of the peritoneum, that it has been shown by many investigations that even a direct or indirect introduction into the peritoneal cavity of pyogenic organisms can set up an acute peritonitis only providing there be present some local predisposition.

Grawitz, for example, has shown that in

dogs, if pyogenic organisms along with an absorbable amount of fluid be injected into the normal peritoneal cavity, peritonitis is produced only when they are introduced in excessive amount, or when simultaneously there occurs or is present some necrosis of tissue by which the pathway is prepared for their penetration into the deeper layers of the serosa, or when some wound of the abdominal wall favors localization of infection. (Charité Annalen, 1886.) In another place I have more thoroughly discussed the pathological side of this question, and prefer not to weary you with all of it here. (See my Mütter Lectures on Surgical Pathology, page 135 *et seq.*)

Let me add only that Cheyne has shown that suppurative peritonitis occurs with the greatest certainty when there is a wound or some other focus, in or near the abdominal wall, from which infection can occur, and from which as a centre organisms are constantly being passed into the cavities themselves. This is still more certain to occur if the wound be an unhealthy one. For example, in rupture of the healthy bowels if the extravasated contents are early thoroughly removed, and the edges of wound approximated, recovery commonly occurs; but if the perforation of the bowel wall takes place in an unhealthy area, there has been already established a nidus in which organisms have been growing, and presumably in their more virulent forms.

With these remarks we are now prepared to take up the pathological classification, which I have modeled after that of Bumm.

1. *Aseptic Form*, usually local, not always. Characterized by hæmorrhagic and fibrinous exudate with strong adhesive tendency.

2. *Infectious Form*, divided into (a) *staphylococcus* and *streptococcus forms*—the latter are usually post-puerperal or are connected with pelvic diseases of women, and are more rapidly fatal; (b) *colon infection*, due to the bacillus coli communis; (c) *septic*, characterized by pus instead of ichor, and by acute onset with chill and pyrexia; (d) *putrid*, usually the result of the perforative forms.

3. *Specific Forms*, tubercular, actinomycotic, and gonorrhœal, if there really be such a specific form.

(Flexner has recently described a case of peritonitis where the infection was due to the *proteus vulgaris*. So far as I know, this is the only instance of its kind and hardly deserves to be classified as yet in one or the other of the above forms. For all we know, there may be other bacteria which have at one time or another a power of setting up the same condition. Such cases, however, are necessarily so rare that in such a discussion as this we may omit all further reference to them. Suffice it that for our present purpose the second, or infectious form, is that with which we particularly have to deal at present.)

Going into a little more detail, it may be said of the first, the *aseptic* form, that it is at least rare, though experiment has shown that it is possible to provoke congestion, or exudation, or even hæmorrhage into the peritoneal cavity, which shall be accompanied by certain symptoms and shall not assume an infectious type. These cases are sometimes post-operative, but most often they are produced by contusions or external injuries.

The *infectious* forms are those which most interest us here. It has been shown that pyogenic organisms produce peritonitis for the most part when introduced in excessive amount, or when some other substance is present and assists their penetration into the deeper tissue layers, or especially when some previous lesions favor the localization of the infection. The first, the *streptococcus* and *staphylococcus* cases, are usually met with after parturition or abortion. They occur also after acute or recurring tubal or ovarian disease, and on section there is found a thin puruloid, odorless exudate, or if late this may be thick and creamy. Early in the disease this exudate is extremely infectious; it loses its virulence as it progresses or in proportion to its slowness.

We have spoken above of a gonorrhœal form of peritonitis as belonging to the specific type. This is in deference to certain authorities whose statements we nevertheless feel inclined to challenge. So far as the writer has been able to study the question, a pure type of distinct gonorrhœal infection, by natural channels, is almost an impossibility. Most of these cases are really instances of mixed infection, the gonococci

being almost invariably associated with staphylococci or streptococci. It surely is so in the urethra, and is probably so in pelvic infections in women which are ascribed to previous or latent gonorrhœa. With these cases, in this place, we have nothing further to do.

Peritonitis due to infection from the *colon* is a variety recently established, mainly by the investigations of Welch and his colleagues in the Johns Hopkins Hospital. By their investigations and those of others it has been completely demonstrated that under certain conditions, not yet completely understood, the colon bacillus escapes from its ordinary habitat, and is capable of producing intense and even fatal disturbance, not only in the peritoneum, but in widely distant parts of the system. For a moment I wish to drop its further consideration and discuss the other infectious forms of peritonitis, namely, the *septic* and the *putrid*. The former is probably also an instance of colon infection mixed with other forms. As already stated, it is characterized by pus instead of ichor, and by a sharp onset with chill and pyrexia. The putrid form is that which occurs most commonly after operations for perforation. It begins with a chill, but with fever which gradually augments, and is characterized by a putrid, foul-smelling exudate. It is more infectious than the other forms and contains a mixture of micro-organisms, many of which are known to be non-pathogenic, and some of which at least are saprophytic; in other words, it is the result in large measure of putrefactive organisms, while the pyrexia which accompanies the condition is due chiefly to the ptomaines which they produce, and the decomposition of the exudate is due to their well known destructive properties.

Recurring now to the colon bacillus, with which this paper largely deals, let me go over briefly some of its most salient features. It is known to be an inhabitant of the alimentary canal, where it probably has more or less to do with the breaking up of food products, *i.e.*, digestion. In the healthy intestinal canal it never exists alone, but is probably always mingled with other organisms, with some of which it may enjoy a sort of commensalism. It has been abundantly shown by various observers that this organism has the power of passing through the uninjured intestinal wall and peritoneum. The fact is established, although the mechanism of its passage is not known. One of the most significant features in its life history is that within wide limits it varies in virulence and that in its ordinary state it is usually not virulent. This will account for the slightly infectious property of the pus met with in certain intra-abdominal abscesses. This will account, too, for the fact stated by many surgical observers, that pus from the gall-bladder, and pus from many pericœcal abscesses, when accidentally allowed to escape into the peritoneal cavity, seems often to be devoid of poisonous properties. That it varies in virulence within extensive limits is most certain. This variation finds its highest pathogenic expression in cases of cholera nostras, since when recovered from these and inoculated it usually causes death from acute septic infection within twenty-four hours. This virulence is best retained in bouillon cultures; those on agar lose it much more speedily, and virulent cultures may thus be attenuated. When the colon bacillus manifests pyogenic properties and produces pus, it appears to be because it has become in some measure attenuated. When death occurs and seems due to suppuration produced by it, although probably in reality due to an intoxication, the bacilli are rarely found anywhere else save in the pus. So we have to deal with the organism under two conditions—at one time as an active agent producing acute septic infection, at another as a common pyogenic organism producing local abscess.

It is of interest here to state that the colon bacillus is identical with the organism which Passet called the *bacillus pyogenes fœtidus*, as well as with the *bacillus lactis aerogenes*, and with Clado's urinary pyogenic bacterium. In fact, the colon bacillus is the organism in so-called urinary infection. We are not yet in position to state definitely the exact condition under which this organism forsakes the alimentary canal and gains entrance into the kidneys, urethra, or bladder, or passes up the biliary duct into the gall-bladder and into the liver, setting up, as it is known to do, abscesses in both these locations; nor how it may in rare instances produce pleurisy or endo-

carditis, or even abscess of the brain as I personally have known it to do. But although we cannot explain its migration nor account for its presence, we can at least recognize the latter, and we now know that the colon bacillus is probably the greatest enemy with which the laparotomist has to contend, and we know that without extreme care it is very easy for him to get a post-operative peritonitis which is due to infection of the peritoneum by this bacterium, which is not necessarily fatal, but which is most undesirable and serious, to say the least.

Let us now leave the peritoneum for a little while and consider the appendix. Concerning its anatomical location we are at present not concerned, but it seems to me of very striking importance that we recognize one or two points in its histological construction. It was Bland Sutton who first pointed out to us that on the margin of every such diverticulum or normal sac there is a collar of lymphoid tissue. We see it, for instance, at the upper end of the œsophagus, in the shape of the faucial and pharyngeal tonsils. It is found moreover in many other places. There is also more or less of this same lymphoid tissue about the opening into, and the tissue of, the appendix. It is inflammable in a high degree, and it is also easily infected. Its character is such, moreover, that when infected, infection may travel easily, and may be both destructive and hard to subdue. By means of the communication which this lymphoid tissue enjoys with the lymph vascular system, it is easy for the infection to migrate—in other words, for it to spread. The appendix is, moreover, so constructed that when once infected, mycotic necrosis is easy. (This is of course accepting Eppinger's views concerning *necrosis epithelialis mykotica.*) That is, from pressure and irritation by fæcal masses, and resulting exudate, there follows easy invasion of sub-epithelial tissue, with extension frequently to the peritoneum. Along with this also goes such stricture of the proximal end and dilatation of the distal end, with retention and vascular stasis, that gangrene often occurs. Another point of no small interest about the appendix is that it is a vestigial relic of a formerly useful organ which in the evolution of the human race is being gradually gotten rid of. That is, it is now undergoing retrograde changes, and like all such retrogressive tissues or parts it is extremely liable to inflammation, and when inflamed seems to have very little power of vital resistance.

What now are the common clinical causes which lead to appendicitis? For the most part they are connected with atony of the large intestines, with fæcal retention, improper function of the mucous membrane, defective secretion, irregular contraction of the muscular coat, and mild forms of chronic colitis. Simon has recently called attention to attenuated forms of this kind of trouble as frequent in young people and especially in children. Dietetic vices are the most common causes of the condition above alluded to. These vices may consist of excessive eating, or eating of improper food, and the gradual establishment of unhygienic habits concerning the emptying of the large bowel. Previous diseases, like typhoid or dysentery, frequently leave behind them certain lesions in the colon which predispose to distension of the intestine and chronic inflammation. They leave sometimes also cicatricial reminders of their presence in the shape of adhesions, contractions, and probably rigidity of the ileo-cœcal valve, all of which are important predisposing causes. (Gambetta's case furnished a remarkable example of this kind.) In other words, these causes, contributing more or less to the irritative contractility of the intestines and the accumulation of fæcal débris, predispose to appendicitis. So much for the general causes. The more immediate causes connected with this inflammation seems to be inseparable from encroachment of various perivascular exudative infections through the submucosa, and occurrence of ulcers through circulatory disturbance, which may go on to perforation. Or the exudation may be so great as to produce gangrene very early from mere strangulation. It will be remembered that the appendix itself is not supplied with abundant blood-vessels, but has only a single nutrient artery, consequently stasis due to sepsis may easily and early shut off all blood supply. Most of these causes probably begin as endo-appendicitis, after which the necrotic changes quickly follow in the mucosa itself. When we have rapid formation of phlegmon around

the inflamed portion, there may be several distinct foci of suppuration, although it is not necessarily always the case. Peritoneal infection probably spreads along that portion of the peritoneum which invests the appendix. We have not yet learned the condition, which in one case permits the formation of adhesions and the limitation of the exudate, or in another permits of widespread infection. That the fibrinous exudate may be very large in amount, the rapid formation of tumor and sometimes its almost equally rapid disappearance amply proves.

As a matter of fact, however, there are very few of these cases which are not really caused by colon infection, or infection by the colon bacillus. (The researches of Dr. Bristow reported recently by Dr. Fowler in the *Annals of Surgery*, January, 1894, p. 28, show that pure cultures of colon bacilli can be obtained from the peritoneal surface of an inflamed appendix which has not undergone perforation, as well as from non-encysted intra-peritoneal collections of fluid. A chronic condition such as above described, or a more acute one of the same or more outspoken inflammatory character, leads to stasis and such anatomical disturbances in the structures of the appendix itself as to cause them to lose their resistance and to fall a sudden prey to the colon bacillus, whose virulence perhaps has recently been augmented by some disturbance farther up the alimentary canal. There are now countless cases on record to show that we have to do in a large proportion of instances with a primary and perhaps pure infection of this kind. At other times it is undoubtedly mixed, the colon bacillus being mixed with the ordinary pyogenic staphylococci and streptococci. My own impression, although I would prefer not to state it too strongly at present, is that the most virulent or most rapidly infected cases are those in which we have mixed infection. Still the colon bacillus as we often meet with it is enough to kill many persons, not only in spontaneous cases like those of appendicitis, but in post-operative cases of peritonitis, where not infrequently the pus is found to be a pure culture of this organism.

I want to insist, therefore, upon maintenance of this position—that appendicitis is always due to local infection, which, as in all other parts of the body, may proceed to gangrene. It sometimes happens that this gangrene is so much more rapid than could probably occur by mere cutting off of blood supply that we are compelled to suppose that the infective agents themselves possess a most destructive virulence amounting practically to malignancy.

What now is the relation of appendicitis to peritonitis?

When we consider the anatomical relation of the two structures, it will be seen how easy it is for infection to proceed from one to the other without reference to whether perforation has taken place or not. In other words, peritonitis may follow the non-perforative as well as the perforative form of appendicitis. It depends in some measure upon whether the latter be of pure or mixed type. At times the virulent products which are poured out in the peritoneum are so ichorous and so profuse that patients die in collapse without excessive meteorism, or without those general appearances which would give the average practitioner to understand what has occurred. At other times the infection of the peritoneum is so rapid, the paralysis of the intestines so complete, and the distension of the abdominal cavity by the retained gases within the bowels so extensive, that the case is presented almost from the outset as one of acute obstruction of the bowels, in which case proper appreciation of the other conditions is perhaps prevented. For my own part I have been called to more than one case of so-called acute obstruction with enormously distended belly, giving a history of pain indefinitely located, with vomiting early and excessive, shortly becoming stercoraceous, in which the patient's own description of his early symptoms contained no reference to his ileo-cœcal region, and in which the enormous distension prevented recognition of a tumor or any adequate physical examination. And if I have seen such cases, I am sure that many others have, and that it is possible for the most experienced to be deceived. In two such cases it has happened to me to be compelled to operate, rather against my will, simply because the patients desired to take the chances of an operation rather than to die in an other-

wise hopeless condition. In both of these instances a gangrenous appendix, with local gangrene of the cœcum, was found, and the peritoneal cavity contained more or less thin, ichorous discharge, apparently no part of its extent being free from this putrid infection. In at least one of these cases, culture methods gave only pure colon bacillus without mixed forms.

When properly regarded there is nothing stranger about these cases than it is that peritonitis should follow lesions such as internal strangulation of the bowels, strangulated hernia, or other lesions which we have long known to occur. In almost all of these latter instances the peritonitis is of a pure type of colon infection, and yet we all know how frequently fatal it is.

For my own recognition of this course of the disease—that is, for my appreciation of the fact that most cases of so-called spontaneous peritonitis are due to trouble located near the appendix—I have to acknowledge my obligation to Dr. Joseph Price. Since he called my attention to it I have carefully scrutinized my cases and have made bacterial investigations whenever possible, and my convictions have strengthened with the progress of events, until now I have no hesitation in taking the very positive ground which I assume in this paper. Before the French and other investigators had so generally published the fact that the pus from most cases of so-called perityphlitic abscesses was in fact a pure culture of the colon bacillus, I had established this fact in my own laboratory and from observation in my own practice. I had failed, however, to draw the wider conclusions given above, as most others had failed, until I received the hint from Dr. Price. Since then, with a broader view thus inculcated, I have more carefully investigated my own cases, and my successes or failures, and have frequently asked myself how it happened that others had failed to recognize the same sequence of events; and I have come to the conclusion that for the most part such failure of diagnosis is to be explained on the following grounds:

1. The very common and early diffusion of pain with which many of these cases begin, even those where the phenomena subsequently become strongly localized. This is not always due to ignorance on the part of the patient, for many intelligent people are unable to indicate the place where they first felt the pain of which they so bitterly complain.

2. To the frequent insidiousness of the disease itself, and especially to that with which pus forms in many of these cases.

3. To carelessness in the first examination, and to failure to appreciate the real nature of the lesion in true appendicitis. This is purely a matter of ignorance, and concerns mainly those men—their number very rapidly diminishing—who diagnosticate all these cases as inflammation of the bowels.

4. To failure to recognize the induration or tumor in the right ileo-cœcal region, which failure may sometimes be well excused because of the distension of the abdomen, the acute sensibility of the part, and the pain which the slightest manipulation produces: in other words, to the impossibility of proper examination.

5. To the fact that some of these cases present, almost from the outset, common signs and symptoms of primary obstruction of the bowels, and that the diagnosis once made by the attendant is not altered to suit the other aspects of the case as they develop. As already indicated, I think we must have charity for those who make this mistake, because to my knowledge it has been made by good and competent general practitioners.

To conclude: The thesis on which I have endeavored to build this paper is as follows:

First. There is no such thing as an idiopathic peritonitis. Every so-called case has a definite origin, which, however, it may not always be possible to easily determine:

Second. Many cases of non-traumatic peritonitis have their origin in the female pelvic organs, and are usually of the type mentioned under 2 a, *i.e.*, they belong to the staphylococcus and streptococcus forms; but some of them are really cases of colon infection:

Third. Those cases which depend upon perforation after ulceration, escape of gallstone into the peritoneal cavity, and lesions of this general nature, fall into the septic or putrid forms:

Fourth. Peritonitis due to internal ob-

struction or strangulated hernia, is usually due to colon infection:

Fifth. Cases of peritonitis which do not originate in the manner already referred to, almost invariably proceed from the appendix vermiformis, and of all these a larger proportion are cases of pure colon infection:

Sixth. The larger proportion of these are fatal unless surgical procedures be used:

Seventh. In every case of peritonitis for which obvious cause is lacking the ileo-cœcal region should be carefully examined, if suspected should be explored, and this exploration may well be made under an anæsthetic with all conveniences at hand for the most formidable kind of operative procedure.

I would like to add in addition to what has been said above, and in a certain way in self-justification, that this paper was prepared early in December before the appearance of at least three different articles which have dealt in a measure with this subject, and by which the statements herein made have been independently confirmed. These are articles by Dr. M. H. Richardson, of Boston, in the *American Journal of the Medical Sciences*, December, 1893; by George R. Fowler, *Annals of Surgery*, January, 1894; and Dr. Hodenpyl, in the *New York Medical Journal* of Dec. 30th, 1893.

The writer took practically the ground which he has in this paper in another read before the American Surgical Association in June of the past year, and has been practically teaching for two years that the colon bacillus is the source of this infection.

WHEN IS ABDOMINAL SECTION FOR PERITONITIS DEMANDED?*

BY T. M. GEHRETT, M.D.

In discussing the question of peritonitis, a clear definition is essential. As an anatomical entity, the term signifies an inflammation of the peritoneum. Viewed in the light of modern investigation, it must be regarded as secondary—the result either of trauma or the invasion of one of the many micro-organisms present in preëxisting disease. Idiopathic peritonitis seems to have been relegated to the realms of antiquity—at least its existence is questionable.

To discuss the source of every case of peritonitis is beyond the scope of my ability; further, the cause or causes cannot always be determined. It may be the uterus or the Fallopian tubes, or the appendix vermiformis, that is at fault; or perforation due to ulceration, gall-stone, strangulation of the bowel, tuberculosis, etc. Any one of these may be the ætiological factor.

The cause, however, should if possible be definitely determined, for upon this depends largely the question of treatment; but, unfortunately, we have frequently to treat patients without knowing the exact anatomical conditions which exist. Sometimes—perhaps I had better say as a rule—we have symptoms to deal with only; and the early symptoms may be interwoven or occur in conjunction with preëxisting disease, or be modified by reason of being secondary. We also meet cases suggestive of pericœcal inflammation, evidenced by pain in the iliac region, with or without diarrhœa, and that suddenly collapse with continued vomiting, pointing to a general acute inflammation. A suppurating mesenteric gland or a local abscess may keep one in doubt for days.

Peritonitis due to aseptic causes such as trauma or the action of a chemical irritant, requires little save rest and attention to the diet; but these cases are the exception. For a long time opium was prescribed for peritonitis just as is quinine for malaria or sulphur for scabies; in fact, until a few years since, when Dr. Tate showed its fallacy and recommended salines, its employment was universal.

Who has not seen a case of threatened peritonitis, and also fully developed types thereof, disappear as by magic under the free use of sulphate of magnesia? In my opinion, the physician who at this day and age persists in the employment of opium, deprives his patient of a source of relief by salines which modern experience requires to be given. Salines are demanded in all cases, yea, even in the early symptoms of appendicular peritonitis—presuming, however, that no one will be foolish enough to prescribe them in actual or threatened perforation.

Surgical interference is demanded in all

*Read before the Northwestern Medical Association of Ohio.

cases of perforation, or where the presence of pus, blood or septic matters of any sort, encysted or in the free peritoneal cavity only, has resisted the action of salines and the power of the peritoneum to eliminate. If encysted, the opening should be made directly into the cyst, avoiding the free peritoneal cavity. If on section the free cavity of the peritoneum has been entered, and an encysted trouble is found attached to the parietal peritoneum, it is proper to close the section and open directly into the cyst; but if no attachments are found, it is better to stitch the cyst wall to the parietal peritoneum and postpone for a few days (until adhesions have obtained) the opening, leaving the cyst to point in the parietal opening.—This is not without danger, however, for the delicate walls formed of plastic exudates may yield to the pressure, and the extravasated contents infect the entire peritoneal cavity; yet the risk is less than in opening the cyst at once.

Some advise, in making abdominal section for peritonitis, that the operator should be persistent in his effort to find the primary cause; but this I believe to be bad practice as a rule. I desire to insist that visceral adhesions should never be disturbed in the vain hope of finding a primary lesion, for such is rarely discovered and *may not exist at all*—it may have disappeared! If the primary cause is not apparent on opening the abdomen, and cannot be removed in its entirety, it is better to thoroughly irrigate the cavity with an antiseptic solution, institute thorough drainage, and allow the primary trouble to take care of itself—treating, in fact, as an abscess.

July 20th, 1893, I was called to see Mrs. J——, 32 years of age, in consultation with her family physician, Dr. Hersh, of McComb, Ohio. The patient presented a typical picture of septic peritonitis of puerperal origin. It was the tenth day after the initial symptoms; the temperature 100.5° F.; pulse 140 and quite feeble; the abdomen distended, with diffused tenderness; the pelvis filled with an inflammatory exudate; some vomiting. It appeared as though dissolution was imminent—that a fatal result must accrue in a very few hours at farthest. Salines and stimulants had failed to give relief, hence abdominal section was proposed; the proposition was promptly accepted by the patient, and, strange to say, by friends also. I called to my assistance my good friend Doctor Beardsley, of Ottawa, and, after the usual preliminary preparations, we opened the abdomen through the linea alba, making an incision about five inches in length so as to thoroughly expose the peritoneal cavity. The adhesions encountered were simply frightful—the omentum, intestines and pelvic organs one conglomerate mass. After some difficulty, owing to adhesions and inflammatory exudates, we succeeded in passing a rubber drainage-tube down to Douglas' *cul de sac*. After thoroughly cleansing the cavity, the wound was closed up with silkworm-gut sutures, leaving the drainage tube *in situ*. Reaction was prompt, improvement of symptoms began at once, and recovery was uninterrupted.

Of the condition of the case at the moment of operation, and the gratifying results achieved, Doctors Beardsley and Hersh will bear testimony.

I might report a number of cases of which the above is a fair type, with equally good results from simple incision and drainage, but will allow this one to suffice. I desire, however, at the risk of wearying, to report another case that came under notice a few months since, in order to illustrate the fallacy of aggressive surgical interference in breaking up adhesions with a view to solving the cause.

On August 15th, 1893, I was called to see Mr. B——, a man about forty years of age. Health had always been good, with the exception of an old hernia which gave trouble at times by becoming partially strangulated; after being reduced, diffuse abdominal pain would ensue for several days. On the evening before, he had been to town, and while walking home, with hands in trousers pockets, fell "headlong" on his face and abdomen. No inconvenience was experienced at the time, and he felt about as usual on retiring that night, but about 3 A. M. awoke with pain, at first confined to the region of the bladder, but later becoming diffused over the entire abdomen. A few hours later the suffering became so acute he was compelled to call a physician. Relief not being obtained, I was summoned in consultation.

The objective symptoms in the case were: Pulse, 110 and full; temperature, 102.5° F.; abdominal muscles tense and abdomen slightly tympanitic; no vomiting at any time, but flatus passing at intervals. I confirmed the diagnosis of the attending physician, viz.: peritonitis, probably due to the breaking up of some visceral adhesions by the fall on the evening before. We prescribed sulphate of magnesia and ordered hot turpentine stupes to abdomen, while awaiting further developments. I left the patient in advance of the attending physician, but had gone but a few minutes when another physician arrived upon the scene. The patient and friends were very much alarmed, and it afterwards appeared this third physician had been summoned about the same time as myself, though we who had been in attendance were not notified of this fact.

I am indebted to the physician whom I met in the case for notes of what followed: After a hasty examination, the new arrival declared the abdomen must be opened at once or the patient would surely die. A reluctant consent was given, the patient at once placed on a table, and an incision made. The omental and intestinal adhesions were broken up and the intestines taken from the abdominal cavity. In breaking up these adhesions a rent was made in the bowel, which was afterward closed. Considerable trouble was experienced in returning the intestines, but this was finally accomplished and the wound closed. No cause was found to account for the trouble.

It is perhaps unnecessary to add, the services of an undertaker were demanded a few hours later.

Now what the doctor saw in this case that demanded such precipitate and radical interference, I am unable to conjecture. There were no subjective or objective symptoms that indicated perforation, strangulation, blood, pus, or fluid of any sort within the abdomen. Had there been only an exploratory incision made and drainage instituted, I do not think the chances for recovery would have been materially compromised; but entirely too much was done. I can excuse the physician whom I met in the case on account of his youth—he had entered the profession only a few months before, and naturally felt compelled to bow to the dictates of his elder brother.

Surgical interference in these cases should be timely; but there is no definite rule by which one can be governed. There are no general positive symptoms. In each individual case the surgeon must exercise his best judgment, always reserving liberal conservatism. There are those who advocate laparotomy in all cases of peritonitis, believing washing out and draining the cavity of first importance. On the other hand, I think there are few of us possessed of considerable experience but have seen patients of this class recover after operative interference had been urged and refused. However, if good reasons exist to suspect the presence of pus, if there is hectic fever, local dullness below the umbilicus, fluctuation, œdema of the abdominal walls, or if tuberculosis is strongly suspected, surgical measures should be urged.

Deshler, Ohio.

ABDOMINAL SECTION IN A CASE OF CYST OF THE MESENTERY.

BY J. ADRIAN COGGANS, M.D.

I have been induced to write this paper from the fact that cysts of the mesentery are extremely rare, and operations for removal most generally fatal. Delangeniere* presented specimens of a tumor of the mesentery to the Anatomical Society of Paris, removed by Guyon from a woman forty-five years of age suffering from epilepsy, that had occupied the left hypochondriac and lumbar regions, and was as large as a fœtal head; it was of such size, and caused such pains, that Guyon removed by aspiration thirty-two ounces of a brownish fluid containing albumen, urea, phosphates, and chlorides. Within two weeks after aspiration the tumor was as large as before, when it was decided to open the abdomen and attempt removal. At the beginning of this operation twenty-eight ounces more of fluid were removed. Examination revealed the cyst originated in the mesocolon; it was finally enucleated, after ligating many large blood-vessels. The patient died on the seventh day after the operation.

*J. Ewing Mears: *Sajous' Annual of Universal Medical Sciences.*

Sir Spencer Wells* reports two tumors of the mesentery, one solid, the other cystic. The former was successfully enucleated, but the latter he incised and drained, the patient dying a few weeks after the operation.

Greig-Smith† describes seven cases of lipoma of the mesentery, as follows: Terrillon‡ presented one to the Academy of Medicine of Paris; Homans‖ performed two operations, one in a male thirty-nine years of age (his first attempt to remove the tumor in this case was a failure, but a successful operation was performed some months afterward, though the patient finally died from shock), the other, every way similar even to fatality, in a woman sixty years of age; three cases are described in the Transactions of the Pathological Society of London; and Cooper Forster,§ in 1868, showed a large fatty tumor at the Pathological Society of London, removed from a woman after death. Greig-Smith¶ also says he knows of two cases of cyst of the mesentery wherein operations were performed for their removal by his friends, but that have not yet been published.

Doctor Calvin Ellis also had a case that exactly paralleled those of Homans.

Pean** describes three operations for cystic tumors of the mesentery, with only one success. Watts†† describes an operation for cyst, the tumor in this case being mistaken for ovarian. Carter‡‡ likewise describes an operation for the removal of a cyst of the mesentery of two years' growth, containing sixteen pints of fluid, in a female forty-four years of age; the attachments to the spine and lumbar region were so firm, and the cyst so closely encircled by coils of the small intestine, that the attempt to remove was abandoned, the operator instead incising and draining, and stitching the lips of the cyst to the abdominal walls; the patient finally died from septicæmia and hæmorrhage.

Doctor Granville Bantock§§ describes a mesenteric cyst in a young girl fifteen years of age, who sometimes had a temperature of 105° F. Sir Joseph Lister agreed as to removal, and on February 16th, 1886, an incision was made in the abdomen, along the outer border of the rectus muscle, which exposed the tumor (about the size of a Mandarin orange) covered by the mesentery, the blood-vessels of which were enormously enlarged; it lay in close proximity to the left kidney, for which it was at first mistaken. Many ligatures were required, a drainage tube was inserted, and the patient made a tedious recovery. The tumor, weighing one pound, is now in the museum of the Royal College of Surgeons. Mr. Eve made the following report on this specimen:

I am quite at a loss to explain the origin of this tumor; it is composed of a number of intercommunicating *loculi*, separated by numerous septa, that contained glairy fluid. The situation being so unusual, I conjecture that it originated from some fœtal structure —possibly, some of the rudiments of the permanent kidney; it was too high up for the Wolffian body. The other possibilities that occur to me are, that it was an ovarian cyst which had become separated by twisting of the pedicle, or that it was of the same nature as cysts that appear in the great omentum.

Doctor Bantock adds: "I take Mr. Eve's first explanation as being the probably correct one of the origin of this tumor. It was situated too much behind the mesentery for an ovarian tumor that had been separated from its attachments."

The case upon which I operated for mesenteric cyst was an unmarried lady, daughter of a physician of Columbus, Ga.; age, twenty-one years; fair complexion; weight when in health, 120 pounds; family history good. I saw her for the first time February 7th, 1891, when I was informed she had been out of health for about two years, but referred the beginning of her abdominal trouble to a cold contracted in New Orleans about May, 1890. It was not until November or December of the same year that she called her father's attention to the fact her abdomen was becoming larger, and subsequently she was seen by several physicians and treated for abdominal dropsy. At the time of my visit the abdomen was quite large, pulse 110 per minute, and temperature

* *Lancet*, May 5th, 1883.
† Greig-Smith: Abdominal Surgery.
‡ *Journal of the American Medical Association.*
‖ *Lancet*, 1883, p. 449.
§ Greig-Smith: Abdominal Surgery.
¶ Personal communication.
** Tumeurs de l'Abdomen.
†† *American Journal of Obstetrics*, 1879.
‡‡ *British Medical Journal*, Jan. 6th, 1883.
§§ Personal communication and *Lancet*, 1887.

100° F. I diagnosed abdominal cyst. The tumor occupied mostly the left side of the abdomen, beginning under the ribs in the left lumbar region, dipping down into the pelvis, and extending three inches to the right of the median line of the abdomen into the right side. I decided to remove some of the fluid for examination, and by aspiration drew off about one quart; it was thin and dark-colored, and contained albumen, phosphates, and chlorides.

I saw her again February 13th, 1891; she had suffered much pain accompanied by nausea and vomiting, and was more prostrated than before the aspiration. A radical operation for the removal of the tumor was proposed, and, consent being obtained, February 24th was selected as the date. I asked Doctor W. E. B. Davis, of Birmingham, to assist, and he fully concurred in the diagnosis, but, like myself, was unable to explain the origin and attachments of the cyst. I was also assisted by Doctors J. W. Mitchel (Hamilton, Ga.), T. S. Mitchel, and Phillips (Columbus, Ga.).

The strictest antiseptic measures were carried out, and the abdominal incision made in the linea alba, extending two inches above and two below the umbilicus. On introducing the hand, it was evident the attachments of the cyst were high up in the abdomen and in the region of the left kidney; the left kidney, however, was easily recognized. The walls of the cyst were covered with omentum, and many large blood-vessels and loops of small intestine encircled it, being deeply imbedded in its walls. An attempt to enucleate was followed by such profuse hæmorrhage it had to be abandoned. Consequently, a point on the walls of the cyst, as remote as possible from blood-vessels and intestinal loops, was selected for incision and drainage, and more than a gallon of thin, dark-colored fluid evacuated. The cavity was then irrigated with hot water, the incised lips stitched to the upper angle of the abdominal wound, an ordinary six-inch glass drainage-tube introduced to the bottom of the sac—the general direction of this being upwards and backwards,—and the abdominal opening closed with silkworm-gut sutures. From the appearance of the sac and its deep attachments, both Doctor Davis and myself arrived at the conclusion it was retro-peritoneal—in other words, that the cyst was between the layers of the mesentery. The time consumed in performing the operation was about twenty-five minutes. On the morning of the operation the patient's pulse was 120 per minute, and temperature 100° F. She came out from the anæsthetic well, and at 10 P.M. of the same day temperature was but 100.6° F., and pulse 130 per minute.

February 25th, 7 A.M., temperature 99°, pulse 104; 6 P.M., temperature 99.2°, pulse 110. February 26th, 7 A.M., temperature 98.5°, pulse 110; 6 P.M., temperature 100.2°, pulse 106. During this time the fluid was drawn from the sac at intervals of three or four hours, and the latter thoroughly irrigated with warm water. An enema of warm water was given, and the bowels moved well.

February 27th, 7 A.M., temperature 99.5°, pulse 104; 10 P.M., temperature 99.5°, pulse 110. 28th, 7 A.M., temperature 100.2°, pulse 112. March 1st, 7 A.M., temperature 98.8°, pulse 96. Had much nausea and vomiting from time of operation up to March 1st, which I attributed to the intimate connection between the walls of the cyst and the small intestine; this day she took a little food. The sac was irrigated daily as before, the drainage tube being gradually withdrawn.

March 2d, 7 A.M., temperature 98.8°, pulse 100. 3d, 7 A.M., temperature 98.8°, pulse 94; 8 P.M., temperature 98.2°, pulse 96. 5th, 7 A.M., temperature 99°, pulse 96; 6 P.M., temperature 99.4°, pulse 100. 8th, 6 A.M., temperature 98.5°, pulse 100; passed a restless night. 9th, 6 A.M., temperature 98.4°, pulse 90; 6 P.M., temperature 99.5°, pulse 100; quite sick to-day, and suffered from severe pain in the locality of the pedicle, which continued for two or three hours, followed by nausea and vomiting; glass drainage-tube removed, and replaced by a smaller one of rubber.

March 10th, 8 A.M., temperature 98.6°, pulse 90; 6 P.M., temperature 99°, pulse 92. 11th, 8 A.M., temperature 99.5°, pulse 90. 15th, 8 A.M., temperature 98.8°, pulse 76. 20th, 8 A.M., temperature 99.8°, pulse 100. 24th, 8 A.M., temperature 99°, pulse 100. 25th, 8 A.M, temperature 98.5°, pulse 100. Was taken with pain in the region of the pedicle at 10 A.M. on the 24th, and vomited at in-

tervals of two or three hours until the morning, then became comfortable.

March 30th, 8 A.M., temperature 98.5°, pulse 76.

From this time on, her recovery was rapid and all that could be desired.

Alexander City, Alabama.

A CONSIDERATION OF THE TRAUMATIC NEUROSES.

BY HAROLD N. MOYER, M.D.

There is perhaps no more obscure chapter in pathology than that relating to the traumatic neuroses, nor one that has been more burdened with an unfortunate terminology. The difficulties in approaching this subject are by no means lessened by the medico-legal relations which many of these cases present, and which are prone to overshadow the purely medical questions involved.

Notwithstanding the polemicizing of more or less able writers, there stands out the significant fact that many organic and functional disturbances of the nervous system have their origin in traumatisms that are many times relatively insignificant, and that often produce no solution of continuity of the surface, or appreciable alteration of the deeper lying tissues. This proposition will, I think, be generally admitted by almost all members of the profession. As to the exact nature of some of the changes produced by traumatism, their course and termination, there is a wide difference of opinion.

In discussing this subject it is customary to begin with the contributions of Erichsen, who described peculiar, and as he thought distinctive, symptoms that often followed railway accidents and were not associated with demonstrable lesions. To these symptomatic groups he gave the term *spinal concussion*, in accordance with his view that they were due to a transmission of external violence to the spinal cord. The views of Erichsen met with prompt opposition; notably, Page entering a strong protest against his deductions. A careful review of the controversial literature on this subject shows a practical unanimity on one point, namely, that traumatisms are competent to produce marked disturbance of the functions of the nervous system where there is no appreciable external lesion. The opinion that this was due to a transmitted vibratory jar impinging upon the spinal cord, was received with grave doubt. The ætiological element suggested by Erichsen in his term "spinal concussion," has been a great hindrance in the study of this subject, although views have been attributed to him that he never announced, such as a railway spine and other abominations. Readers seem to have overlooked the line on the title page of his monograph, "*Je raconte, je ne juge pas.*" Many writers, recognizing the fundamental error in the term "spinal concussion," and the fact that there were often grave cerebral lesions associated with these conditions, have suggested other terms, such as "traumatic neurasthenia," "traumatic hysteria," "traumatic neurosis," and lastly, in consonance with the term "railway spine," we have the "railway brain." Clevenger, recognizing the stumbling-block in the term "spinal concussion," has named this symptom-complex Erichsen's disease, though it is not apparent exactly what advantage has been gained by the change. If we examine the symptomatology in Erichsen's disease, we shall find it exceedingly complicated. Clevenger gives thirty-one more or less subjective phenomena associated with this disorder. He defines Erichsen's disease to be "a group of mainly subjective symptoms of a nervous and mental nature, sufficiently characteristic to enable it to be recognized as a traumatic neurosis, distinct from other traumatic neuroses with which it may or may not be associated. The most common cause of Erichsen's disease is a concussion of the spinal column, including its contents and nearest appendages."

According to this definition it ought to be possible for us to affirm, in a given case presenting the peculiar symptom-grouping, that a person had sustained a trauma. But that is exactly what we are not able to do. There are cases presenting the peculiar symptom-grouping of Erichsen's disease that have never sustained any traumatism, and in whom, as I have observed in one case, this disorder existed from early childhood.—It was accompanied by pain in the back, with restricted movements of the spine. Paræsthesiæ were present with exaggerated reflexes. The tapping of the tendons caused

such a shock to the spine that the patient decided to discontinue the examination if this proceeding were again attempted. There were the tender spots along the spine, with emotional depression and persistent insomnia.—Now, according to Clevenger, "the foundation, frame, and roof of Erichsen's disease is the back pain and rigidity, the insomnia and emotional disturbance." When these symptoms occur without traumatism, we do not call them Erichsen's disease, but spinal neurasthenia. Wherein lies the necessity of this new symptom-group in which the pathology is obscure? In *chorea* we have a term that expresses a symptom group, concerning which we are still much in doubt as to whether it is of spinal or cerebral origin, and which has an ætiology of wide range; but we do not divide up its terminology and call that form associated with rheumatism chorea, and another case, dependent upon fright by a dog, as the canine disease. Regarding spinal concussion, Clevenger says that in this disorder there is a fixation of the spine, disturbed sleep, pain on moving the back, emotionalism, etc. Let me say that my experience largely differs from Clevenger's, for I have frequently noted some or all of these symptoms in uncomplicated spinal neurasthenia.

In the chapter on electro-diagnosis, Clevenger tells us that the electric current affords an infallible means of converting many subjective into objective phenomena; though it is not quite apparent how this means will be of much value in establishing a symptom group having back pain, rigidity, insomnia and emotional disturbance for its foundation.

It is not claimed in this paper that Erichsen's disease has no existence—that is, that the symptoms of spinal concussion, as he terms it, are not actually present. They occur not only in railroad cases, but in other forms of traumatism, whether or not there is a possible suit for damages. In my experience I have seen as pure types of concussion cases occurring after falls down a pair of stairs or off a step-ladder as I have ever seen presented in a railroad case. Spinal concussion is not a litigation disease, and perfectly pure types are found where no possible litigation can intrude. What we do claim is that it is misleading in the study of these cases to set up a type of disease having a peculiar ætiological factor (concussion) in which the symptoms do not differ from other disturbances unassociated with such causes.

There is no doubt that almost any disturbance of the functions of the cord may be set up by a traumatism. We may have lateral sclerosis, tabes, transverse myelitis, or meningitis, but these diseases do not lose their identity when caused by traumatism. Why, then, should symptoms of a purely functional character, having an origin in other than traumatism, be termed spinal neurasthenia, but the same set of symptoms be called spinal concussion or Erichsen's disease when preceded by trauma?

I feel that I cannot urge this matter too strongly upon the attention of medical men. I believe that there is scarcely a single person reached by this paper who has not been directly or indirectly connected with a suit at law in which the chief ground for damages has been a spinal injury. As time passes, this sort of litigation is becoming increasingly common, and the medico-legal relations of this class of injuries are assuming greater prominence every day. It is, therefore, increasingly important that we have a better verbal definition, that we may present the merits or demerits of these cases properly before our courts of law.

In examining these cases, and in my own classifications, I have omitted the term "spinal concussion" altogether, as standing for any pathological entity, and have proceeded with the examination solely with a view to ascertaining the exact condition of the nervous system. They naturally divide themselves into injuries to the peripheral nerves, and functional and organic diseases of the spinal cord, brain and sympathetic. Of course we may have mixed cases, but it is usually possible to separate the symptoms and refer them to their proper seat. Peripheral-nerve injuries are almost always accompanied by a loss of power in the muscles supplied by the nerve, and in a loss of sensation in the skin to which it is distributed. The nerve may be completely paralyzed for a few days, and regain its function in a comparatively short time. The blow on the nerve may set up an exceedingly slow inflammatory process in the nerve that

may lead to atrophy of the muscles supplied by the nerve, or to wasting of an entire extremity by extension of the inflammatory process. As a rule, if no changes are apparent in the muscles of a part six months after an injury, we can exclude damage to the peripheral nerve. So far as we know, peripheral-nerve trouble is always organic, the nerves having but the single office of conduction; their functional disorders are practically *nil*.

Traumatisms of the spine are divisible into three great groups: First, those of a functional character, which may be generally named by the term Spinal Neurasthenia—they are characterized by fixedness of the spinal segments, pain on pressure, and on motion a subjective sense of weakness in the lower extremities. It is this form of spinal disturbance to which the term "spinal concussion" has been so frequently and so misleadingly applied. It may or may not be associated with some of the organic lesions of the cord which comprise the second group of spinal injuries—which includes all of the systematic and unsystematized Organic Lesions to which the cord is liable. The third group includes injuries such as strains of ligaments and muscles, as well as fractures of the bones composing the spinal column, and which may be followed by the varying symptoms of spondylitis.

I do not claim that the diagnostic differentiation here attempted is easy in every case; in many it can only be made by time; frequently the pain will be followed months after injury by a deviation of the spinal segments, or organic changes in the cord will show themselves a long time after the primary injury. What I do claim is, that it is possible to make a thorough analysis of each case upon these lines within one year of the receipt of the injury, and that it is possible to formulate a prognosis that shall be approximately correct—a thing that is impossible under the symptom-grouping of Erichsen's disease, or spinal concussion.

The classification of head-injury cases is the same that is followed in the spinal. We have first the functional, which includes the cerebral type of neurasthenia; then the group accompanied by mental changes; and thirdly, those which include the organic disturbances, such as hæmorrhage, etc.; lastly, the class in which there is rupture of the membranes or fracture of the bones. Perhaps the frequency of a certain class, namely, the epileptic, would entitle them to separate mention.

I had hoped to present a summary of over one hundred cases of traumatisms of the nervous system, in support of the classification adopted in this paper, but found that it would consume an unreasonable amount of time.

It is claimed that the classification here adopted will enable us to make an accurate estimate of the nature and extent of injuries that are now obscured by the misleading and objectionable terms "spinal concussion," "Erichsen's disease," and "the traumatic neuroses."

Chicago, Ill.

PREMATURE OSSIFICATION OF THE FŒTAL CRANIUM—CRANIOTOMY.

BY R. H. HONNER, M.D.

On November 2d I was summoned to see Mrs. C——, whom I had been engaged to attend in childbirth. I found that although the pains were frequent the os was undilated. There were remissions and exacerbations of the pains until November 4th, at 10 P.M., when I found the os beginning to relax. I remained until 7 o'clock in the morning, when the os was dilated to about two inches in diameter, but had not notably increased during the last two or three hours. The amniotic sac had ruptured early and part of the fluid had escaped. In trying to diagnose the presentation I could not direct the sutures or fontanelles. I called in Dr. J. S. Dean to assist me, and while he chloroformed the patient I applied the forceps. The high operation was difficult, but I succeeded in locking the forceps, and by relieving each other we were enabled to bring the head down to the pubic arch, but no farther. Then, by passing the hand around the neck, we found that the occiput was posterior. We also discovered the reason why the presentation could not be made out before—complete obliteration of the fontanelles and rigid coaptation of the sutures due to ossification. The placenta was found to be attached very low down. We tried rotation and version, but failed. The impossibility of

delivering with forceps, and the failure of rotation and version, compelled us to decide between symphysiotomy and Cæsarean section with all their sources of danger to the mother, or to accept the obstetrical tragedy of craniotomy. We decided upon the latter, and, with perforator and forceps, Dr. Dean brought away pieces of the frontal, parietal, and occipital bones, until the diameter of the head was sufficiently reduced to be delivered. This was successfully done, and the woman made a good recovery.

The bones were about three-sixteenths of an inch thick, and great care had to be used to prevent laceration with the ragged edges. The most striking abnormality of the case was the premature ossification of the fœtal cranium, a form of dystocia so extremely uncommon that obstetricians of extensive hospital and private practice have never met with it.

In my opinion this condition was an indication for craniotomy rather than any other operation. Even if version could have been performed in spite of the rupture of the amnion and the low position of the placenta, or even if rotation could have been induced, craniotomy would have been the final resource. It was almost better that the child should die then than grow up a microcephalic idiot, even with the chance of being relieved by the operation of linear craniotomy, but if, as is probable, the synostosis was only a concomitant of some cerebral defect, or secondary to it, operation would do little good. I regret that mutilation of the brain made it impossible to successfully examine it microscopically.

191 Joseph Campau Ave., Detroit, Mich.

POST-MORTEM NERVOUS EXCITABILITY.

The experiments of M. d'Arsonval with the myophone seem to prove, contrary to general belief, that nervous excitability may exist for several hours subsequent to death. The old test of muscle-shortening is not applicable long after life has departed; but the sound given out by the myophone proves that the death of a nerve is much less rapid than has been hitherto supposed, and that a nerve may act on muscle in a state of electric excitability without producing more than simple molecular vibration.

Correspondence.

A MORE ACTIVE "CATHARTIC PILL" DEMANDED.

Editor of the MEDICAL AGE:

It seems to me as if there is a demand for an active cathartic pill of cheaper grade than that authorized by the U. S. P. First, there are vast quantities of pills purporting to be made by the U. S. P. cathartic formula, marketed at a price which evidences they can be little else than sophistications: Second, it is manifest that the U. S. P. cathartic formula is not sufficiently active in many instances—that is limited in proportion to its ingredients. Consequently I would suggest a pill that embodies the virtues of the U. S. P. considerably intensified, as follows:

℞ Purified aloes, 1½ grains.
Gamboge, $\frac{1}{16}$ grain.
Podophyllin, ½ grain.
Powdered capsicum, ½ grain.
Croton oil, $\frac{1}{10}$ minim.
Excipient q. s. to make 3½-grain pill.

It is well known that the so-called "triplex pill" of Doctor Francis is much more active than the U. S. P. cathartic, and attains much happier results; and yet its activity cannot be attributed to either the 1½ grains of aloes or the 1½ grains each of blue mass and scammony, nor even to the combination of the three, consequently it must necessarily rest with the $\frac{1}{20}$ grain of croton oil.

I am well aware that a general objection exists to the internal administration of croton oil, but such objection is not based upon any tenable ground, and only arises from prejudice and from mistaken ideas regarding the drug. A study of croton oil reveals the fact it is not alone one of the most certain cathartics, but likewise a powerful alterative and intestinal and hepatic stimulant.

Very truly yours,
G. ARCHIE STOCKWELL.

Detroit, Jan. 4th, 1894.

[See "In Re Croton Oil," page 52—ED.]

SIR JAMES GRANT.

This estimable resident of Ottawa has been elected by acclamation as a Member to the Commons in his city. Sir James will accept the congratulations of his medical friends, and we have no doubt his long experience in the Medical Council as a representative of the Ottawa University will be of much service to him.

Society Meetings.

WINDSOR MEDICAL AND SURGICAL ASSOCIATION.

The Association met, pursuant to resolution, on January 9th at the office of Doctor Cruikshanks. Doctor James Samson, the President-elect, took his seat.

Present, Doctors Coventry, Carney, Samson, Stockwell, Cruikshanks, Brooke, Hoare, Teeter, and Ashbaugh.

The proceedings of the last meeting were duly read and passed upon.

The committee delegated to inquire into the feasibility of securing permanent rooms suitable for library, social, and assembly purposes reported negotiations in progress in connection with the legal profession of Windsor looking to the securing of quarters in the new Fleming block, and to the establishment of a joint legal and medical library and reading-room.—Report accepted and authority given to consummate such measures as seemed best to the committee.

A communication was received from the editor of the MEDICAL AGE, of Detroit, offering to publish the proceedings of the Association on condition that first choice of all original articles should be offered to that journal.

It was moved and carried that the proposition of the MEDICAL AGE be accepted, and that this journal during the coming year be the official organ of the Association.

The President-elect apologized for not delivering an address, and also for being unable to present the paper promised on "Some Phases of Malignant Tumors of the Abdomen." He announced also the delivery of his Address at the next meeting of the Association, the title of which will be "Considerations of the Diagnosis of Peritonitis."

Doctor Carney offered a resolution, pursuant to notice given at last meeting, outlining mode of procedure to be recommended to the Mayor, looking to attendance on the poor in emergencies.—Carried.

Doctor G. Archie Stockwell presented a paper treating of "The Criminal and Artificial Production of Deformities and Monstrosities," in which was embodied a very full account and analysis of the process of "foot binding" as practiced in the Celestial Kingdom, and likewise a description of the making of so-called "wild men," and of cripples for purposes of mendicancy, incidentally touching upon the formation of artificial epiphytes and kindred teratological specimens.

The thanks of the Association were voted to Doctor Stockwell for his paper, with a request that it later be published in the MEDICAL AGE.

The Society then adjourned to partake of a banquet offered by Doctor Cruikshanks.

The next meeting will be held at the residence of Doctor Bell, on Bruce avenue, Tuesday, February 6th, at 8 P.M., at which time the host will also present "A Few Cases, with Treatment, of Some Reflex Morbid Conditions Arising from Disease of the Uterus."

D. E. BROOKE,
Secretary.

Windsor, January 12th, 1894.

WAYNE COUNTY MEDICAL SOCIETY.

At a special meeting of the Wayne County Medical Society, held Tuesday evening, January 23d, to take action on the death of their late brother, Dr. Richard Murphy, the following resolutions were offered:

WHEREAS, In His allwise providence it has pleased the Almighty to remove from our midst Dr. Richard Murphy, a valued member of the medical profession of this city, and a member of the Wayne County Medical Society; therefore, be it:

Resolved, That this Society deeply regret his demise, and feel that in his death we have lost an earnest, efficient and upright member of our Society:

Resolved, That the Doctor's genial disposition, and his interest in medical subjects and in the sufferings of his patients, have endeared him to us as a brother practitioner:

Resolved, That we express to the family and friends of our late brother our sincere regrets and sympathy:

Resolved, That the Society attend the funeral, and forward to the family a copy of these resolutions; also publish them in the public press, and inscribe them upon the records of this Society.

SAMUEL BELL,
L. E. MAIRE,
D. L. DAKIN,
O. S. ARMSTRONG,
KENNETH GUNSOLUS,
Committee.

Adopted.

R. H. HONNER,
Secretary.

THIBETAN POLYANDRY.

The eldest son alone of the family marries, and the wife accepts the brothers of her husband as secondary spouses. The whole family is thus held to the home. The children belong to the elder brother, while the younger brothers are lesser fathers. The natives are strongly attached to this custom, the women in particular despising the monotony of European monogamy, and "widow" is a term of reproach among them. Children are very obedient to their fathers and mothers, and the family feeling is strongly developed.

The Medical Age.

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Editorial.

IN RE CROTON OIL.

The communication in our Correspondence columns regarding a more active cathartic pill is opportune, and likewise offers a text for a few remarks regarding a drug, the action of which, as a rule, is little understood.

Croton oil, as is well known, is derived from the *Croton tiglium*, a tree of the natural order Euphorbiaceæ, indigenous to India, the Moluccas, and Ceylon. All parts of the growth possess medicinal properties, but the seeds alone are employed medicinally, and are likewise the source of croton oil. In the Orient the seeds are prepared for use as a safe and efficacious purgative by being boiled thrice in milk, drying well after each boiling, and, finally, removing the outer shell and embryo.

Doctor Waring remarks that he has found the seeds, especially when prepared in the form of pill with catechu and oil of peppermint, uniform in action, "producing five or six copious watery stools, and operating within two or three hours after being swallowed." The oil is drastic purgative in doses of one-half to three drops; but is merely stimulant, cathartic and alterative in doses of $\frac{1}{60}$ to $\frac{1}{20}$ grain. It may be given in the form of a pill with any simple excipient; or if the patient from any cause is unable to swallow, it may be placed at the root of the tongue, its whole purgative action being equally obtainable in this way. Besides activity and smallness of dose, there is another advantage in its employment, viz.: The circumstance of its operating chiefly *through nervous influence;* hence it is emphatically a specific cathartic. When applied endermically to the abdominal region, conjoined with some soft oil, besides acting as a vesicant it proves cathartic in a very short time.

In some persons, it is true, croton oil produces, even in small doses, severe hypercatharsis; yet this idiosyncratic action, which is only rarely manifested, may be readily relieved by a draught of lemon- or lime-juice. When administered in connection with camphor monobromide in the proportion of two to five grains of the latter, its effect is very happy, being devoid of nausea, hypercatharsis, and tormina. Alkalies also modify the acrimony of the oil without impairing its cathartic properties, and the addition of a small portion of opium diminishes violence of action. It may be added that alcohol removes the vesicating principle from the oil without materially impairing its value as a cathartic.

In the obstinate constipation which accompanies inflammation of the brain, mania, and other cerebral affections, croton oil is especially valuable, acting not only as an aperient but as a derivative and revulsive. It is peculiarly advantageous in the treatment of apoplexy owing to the ease with which it may be administered—placed on the back of the tongue it acts freely throughout the digestive tract. It is also efficacious in lead colic when other remedies fail. In dropsical affections where hydrocathartics are indicated, full doses are often preferable to elaterium or other remedies of this class, but it is not admissible when the patient is old and debilitated. In this class of cases it should be first administered in small doses, and then increased according to the amount of purgation induced.

Doctor Heaton, of Leeds, in the *Provincial Medical Journal*, April, 1849, called attention to the fact that when it is advisable to administer a cathartic in albuminuria there is none so convenient as croton oil, which he declares produces "copious evacuations with less sickness and discomfort than elaterium." In neuralgia, tic douloureux, and sciatica, Mr. Newbigging, writing to the *Edinburgh Medical Jonrnal* (January 1st, 1841) asserts all distressing symptoms disappear after its internal administration. In these cases it undoubtedly acts as a revulsive; but it must also be remembered it is claimed to possess a specific power in this class of maladies apart from its purgative action.

Doctor Sewall, of Ottawa, Canada, in

Braithwaite's Retrospect for 1865, urges the extension of the use of this drug to chronic rheumatism, in which he declares he has employed it "with great advantage in many instances."

Physiologically, croton oil, by increasing the vascular dilatation in the intestines, lowers intercranial blood-pressure, consequently it should not be employed when a condition of cerebral anæmia exists.

From the foregoing it may be readily surmised that croton oil is far from the dangerous remedy that it is generally considered, and that employed with due reference to its physiological application it fills a place in therapeutics occupied by no other drug; that it is the remedy chiefly available in disordered states of the nervous system; that it is serviceable when bulky drugs are inadmissible, or where the patient is insane or otherwise unmanageable, or exhibits difficulty in swallowing. It is contra-indicated, however, in young and delicate subjects, in debilitating complaints, and where any portion of the alimentary canal is in an irritable or vascular state, though even under these conditions if carefully administered in conjunction with bromide of camphor or alkalies it may prove of especial service. In minute doses it is unmistakably the best hepatic stimulant we possess.

THE ADVANCE OF MEDICAL SCIENCE.

The fact is not generally known that Chas. James Lever was a skilled medical practitioner, at one time physician to the British Embassy at Brussels, and the author of several valuable monographs, including one on Cholera that alone would have perpetuated his name only that the fame thereof was so speedily overshadowed by his efforts in the world of fiction. He had an utter contempt for unnecessary technicalities in titles, and lost no opportunity of holding such up to ridicule; and in his perhaps greatest work, "The Dodd Family Abroad," which for pure unadulterated wit and clean high-class humor has no equal in the English language, appears a criticism of the advance in medical science, credited to the pen of the immortal Kenny J. Dodd, that is extremely suggestive and not at all inappropriate to the present decade. Kenny J., writing of his son James's duel and the wound resultant therefrom, to his bosom friend and attorney, Tom Purcell, closes with:

It strikes me forcibly that medical science is one of those things that make little progress, considering all the advantages of our country. I don't mean to say that they don't know better what's inside of you, what your bones are made of, or that they haven't more hard names for everything than formerly; but that when it comes to curing you of a tooth-ache, or a colic, or a fit of the gout, my sure belief is they made just as good a hand of it two hundred years ago. I won't deny that they'll whip off your leg, tie one of your arteries, or take your hip out of the socket quicker than they used long ago; but how few of us, thank God, have need of that kind of skill; and if we have, what signifies a quarter of a minute more or less! Tim Hackett, that was surgeon to our county Infirmary forty years, never used any other tools than an old razor and a pair of pincers, and I believe he was just as successful as Astley Cooper; and yet these fellows that come to see James cover the table every day with instruments that would puzzle the Royal Society—things like patent corkscrews, scissors with teeth like a saw, and one little crankum for all the world like a landing net; James is more afraid of that than all the rest. When I saw it first, I thought it was a new contrivance for taking the fees in. The Pharmacopœia—I hope I spell it right—is greater, to be sure, than long ago, but what's the advantage of that? We never discover a new kind of beast for food, and I see little benefit in multiplying what only disgusts you. 'Tis with medicine as with law, Tom; the more precedents we have, the more confused we get; and where our ignorant ancestors saw their way clearly, we, with all our enlightenment, can never hit the right track at all.

LIQUOR-TRAFFIC LEGISLATION.

An equitable and satisfactory adjustment of the laws for the regulation of the sale of alcoholics as beverages has long been demanded. In the United States the different commonwealths have endeavored to legislate each for itself, and in consonance with the apparent regional necessities or the demands of popular clamor; and yet existing legislation is neither satisfactory to the lawmakers or to their constituencies.

South Carolina has taken a new departure by vesting the sale of liquors in the State

itself, but with what success yet remains to be determined. The problem here, as elsewhere, is to throw the desired safeguards about the traffic without interfering with individual liberties. The measure as attempted presents many of the peculiarities of the legislation that now obtains in Upper Scandinavia, but there is little hope, owing to racial and other differences, that it will prove as successful as appears to have been the case in Northern Europe. In Sweden there is a modification of the Norwegian "Gothenburg traffic," as it is called. Here the sale of liquors is farmed out to a company, who, however, must derive no profit from its sale, but only from dealings in hot and cold viands including coffee, tea, cocoa, mineral waters, cigars, etc., and the keeping of all these constantly on hand is compulsory. It is expressly forbidden to sell intoxicants to a minor or to one who is in any degree "fuddled;" and manifestly, since no profit is to be derived from the sale of liquors, there will be no temptation to force their consumption. Indeed, the aim is to secure the maximum offset to the attractions of drink by the presentation of cheap, well cooked food.

In the earlier days of the traffic an attempt was made by the Gothenburg Company to compel, on Friday evenings—when wages are always paid in Sweden—the purchase of a portion of food with every glass of liquor; this, however, was held to be an interference with individual liberty, and consequently was soon abandoned. Latterly the Company has shown its regard for reform by the establishment of numerous reading-rooms in which no intoxicants whatever are sold. The annual cost of maintaining each of these institutions is something over $600, and it is interesting to know that the record during the year ending July 1st, 1893, showed an attendance of upwards of a quarter of a million.

It would seem probable from the foregoing that the true solution of the traffic in the United States, where it is regarded by one class as pernicious in the extreme, and by the other, when subjected to any restrictions, as an infringement upon personal liberty, will be found in a happy medium whereby other attractions gradually lead the community away from the habit of tippling.

SENTIMENTALISM AND CRIME.

At the present moment a deal of rubbish is being promulgated in connection with the condemnation of the assassin of Mayor Harrison of Chicago. It is strongly urged in various quarters that Prendergast should be permitted to escape the consequences of his crime because he is insane. Exactly the same arguments and form of sentimentalism were urged among and by the ultra class of reformers in the case of the assassin of President Garfield. From a sociological point of view at least, there would seem to be little sense and less reason in burdening the public with the support of a criminal, no matter whether sane or insane, when once he has been proven dangerous to the community at large. Of the fallacy of the arguments adduced we have had an excellent example in Michigan within a very short period, wherein a matricide sentenced to penal servitude for life committed an additional murder within the walls of his prison, and yet was not amenable to any form of punishment therefor. But for such puling sentimentality, this particular criminal would not have been for years a burden to the State and a constant source of danger to those who are employed to care for him and others of his ilk.

Certainly there is something incongruous in our sociology when it is demanded a criminal shall be enabled to evade, as far as possible, the penalty of his atrocity. Apropos of this, Mr. G. R. Stetson published in the *Andover Review* an article upon the craze which seems to possess certain persons in favor of exempting criminals from almost any punishment. He justly declares that the social consequences of this delusion are very serious, and adds:

The modern development of this so-called humanitarianism in the treatment of criminals is of triple origin: in ethical agnosticism, and in normal and abnormal altruism. The agnostic class, which is rapidly increasing and has become a power, augmented by the obtuse moralists who condone crime and pardon criminals from purely selfish and personal motives, very naturally advocates the minimum of punishment and the maximum of personal liberty irrespective of the rights of others, and in disregard of the claims of a well organized society. The practical result of extreme humanitarianism is, that crime

increases in the almost precise ratio of the increase of leniency in punishment. Against the growing evils of disorder and depravity, the results of moral obtuseness, obliquity and ethical agnosticism, of the abuse of the pardoning power, and sentimental philanthropy, society has two main defenses: forcible repression by law, and removal by an education which shall teach what is required by good morals and good citizenship.

OLEORESIN MALE FERN AND TÆNIA.

Many of the French physicians, notably Doctor Duhomeau, recommend, when male fern is to be employed as a tænicide, that it be combined with chloroform and castor and croton oils. The claim is made, and no doubt justly, that thereby the efficacy of male fern is enhanced. A much better combination in our experience is, however, a capsule containing:

℞ Oleoresin male fern, 7 minims
Oil erigeron, 1 minim.
Chloral hydrate, 3 grains.
Castor oil, 8 minims.
Croton oil, $\frac{1}{10}$ to $1\frac{1}{10}$ minims.

Dose: One, two, or three capsules, as may be demanded.

The special advantages of this combination are: Entire absence of nausea and griping; increased activity; and particularly that administration does not demand, or efficacy require, the patient to be absolutely starved prior to ingestion. The best mode is to give one capsule an hour after a light breakfast, the latter having been preceded by a half seidlitz powder in water as hot as can be ingested. On the second day administer a whole seidlitz powder in the same manner, or a dose of castor oil. Repeat the capsule on the third morning (and again on the fifth if necessary), likewise the aperient on the intervening mornings. The only unpleasant results noted—in but one patient, and apparently due to idiosyncrasy—was a tendency to dysenteric flux; but as such is dependent solely upon the croton oil, it is readily obviated by the ingestion of lemon- or lime-juice.

Usually it has been found that one capsule sufficed to expel the worm; almost invariably the head of the parasite was found after the ingestion of the second capsule, but on some occasions a third was administered as a precautionary measure against another tænia.

PECULIAR IDIOSYNCRASY.

The *Corpuscle* reports two notable cases of idiosyncrasy: The first, that of a woman fifty years old, in which any preparation of opium produced epileptiform seizures—she had never previously had convulsions of any kind: The second, a young woman aged twenty-five, who on ingesting an egg would develop inflammation of the mouth, tongue and fauces, accompanied by so much swelling the lingual member would protrude from the oral cavity; any article containing egg was sufficient to produce this peculiar phenomenon; and more, a bit of the yolk or albumen placed on the skin would induce decided vesication. This latter patient declared she knew a young man possessed of like idiosyncrasy.

EDITORIAL NOTES.

Health Rules in Six Words.—

Strict temperance.
Correct diet.
Systematic exercise.

Change of Title.—

The *Pacific Medical Record*, published at Portland, Oregon, will henceforth be known as *The Medical Sentinel.*

Suspended.—

The *Epitome of Medicine*, published by G. P. Putnam's Sons, and edited by Doctor J. E. Newcomb, has suspended—or rather has been consolidated with *Braithwaite's Retrospect.*

A Good One.—

A certain Chicago clergyman announced from the pulpit that "Our dear sister, Mrs. X., is suffering from a serious and painful illness. She is being cared for by our dear brother, Doctor G. *Let us all pray for her speedy recovery!*" Rather hard on Doctor G.!

Thanks!—

The MEDICAL AGE is indebted to Dr. F. C. Curtis, Secretary of the Medical Society of the State of New York, for an invitation to attend its eighty-eighth annual meeting, to be held in the City Hall, Albany, on Feb. 6th, 7th, and 8th, 1894.

Items and News.

Spelling Made Hideous.—

Many of the American medical journals are now becoming so hideous in the matter of spelling that it is a difficult matter even for an ordinary educated English medical man to read them without wishing to throw up his task in disgust. The van in this insane effort to appear novel is led by the Philadelphia *Medical News*, and now we learn that the editor of that journal is bringing out a new edition of a "Medical Dictionary of Terms" in which all this new-fangled and absurd method of spelling will be incorporated. The rising generation of young American medicos are to be pitied if they are required to adopt the teaching in orthography which will obtain in this "Dictionary." We are glad to see that some of our leading contemporaries in the United States have not been led into disfiguring their columns by such words as "chemic," "bromid," and "physiologic," together with others equally absurd and hideous. The introducer of this *fin de siècle* method of spelling affirms that no argument can be advanced against it. But what about the rules of grammar and prosody so far as the English language is concerned? Perhaps, under the circumstances, it would be best at once to bring out a book dealing with the subject of "The American Language: its Grammar and Orthography," and then there would be no difficulty in showing that the American method of spelling had nothing to do with the English language.—*Medical Press and Circular.*

Invaluable Cure for Cancer.—

The following is a prescription for the cure of malignant neoplasms by a famous Chinese physician in San Francisco:

℞ Dragons' hearts' blood, 1 ounce.
Pickled lizards, 2 ounces.
Corea ginseng root, 4 drachms.
Willow cricket skins, 12 ounces.
Rattlesnakes' tails, 3 ounces.
Sweet-potato vine, 6 drachms.
Black dates, 2 ounces.
Red bark, 1 ounce.
Devil-fish suckers, 3 ounces.
Reindeer's horns, ground, 210 grains.
Birds' claws, 12 drachms.
Lotus leaves, 6 ounces.
White nuts, 5 ounces.
Old coffin nails, 8 drachms.

Boil the whole in two quarts of water. A tablespoonful every three hours.

The most remarkable fact about this prescription, says the *Pacific Medical Journal*, is that a fairly well educated and nob-hill society idiot paid $100 for it, and lived long enough to take several gallons of the vile decoction.

Coccophobia.—

Probably the most aggressive opponent of the germ theory of inflammation is Lawson Tait. He says that he has, during his professional life, learned and unlearned some four or five theories of inflammation, and predicts that the present prevalent theory—a phase of lunacy; coccophobia, he calls it—will soon go the way of the other theories. —*Canada Practitioner.*

Yankee Enterprise?—

Noticing the fact that the Smithsonian Institution of Washington has obtained a table in the Zoölogical Laboratory at Naples, the *Revue Scientifique* remarks that it is curious that Americans should go to Europe to seek subjects for study when they have so abundant and varied a fauna at home.—*Popular Science Monthly.*

The Michigan State Medical Society.—

Owing to change in the date of the meeting of the American Medical Association, the Michigan State Medical Society will hold its twenty-ninth annual meeting in Lansing, May 3d and 4th, 1894, instead of the first week in June as heretofore announced.

Personals.—

Professor Henoch has resigned the chair of Diseases of Children in the University of Berlin.

At the University of Vienna Doctors Moriz Caposi and Isidor Neumann have been appointed Professors of Dermatology.

The American Public Health Association will hold its annual meeting for 1894 in Montreal, and Doctor La Chapelle of that city will preside.

Von Bergmann, the recent opponent of Morell Mackenzie in connection with the case of the late Emperor Frederick, has been elected Dean of the Faculty of the University of Berlin.

Friends of Harvard will regret to hear of the resignation of Doctor Bowditch, Dean of the Medical School. It is rumored he will be succeeded by Doctor William M. Richardson, who now holds the chair of Obstetrics.

Professor James Russell Reynolds has been elected to succeed Sir Andrew Clark as President of the Royal College of Physicians. Doctor Samuel Wilkes, of Guy's Hospital, received a complimentary vote of seventy-two.

Book Reviews.

A Clinical Text-Book of Medical Diagnosis. By Oswald Vierordt. Edited by Francis H. Stuart, A.M., M.D. Cloth; 8vo; pp. 700. Price, $4.00; sheep, $5.00; half Russia, $5.50. Sold by subscription only. W. B. Saunders, Philadelphia.

This work has attained very flattering success, having gone through four editions within a very short space of time. Moreover, an evidence of its thoroughness and popularity is had in the fact that it is now published in German, English, Russian, Italian, and Spanish.

The material embodied represents the experience acquired during years of work as teacher of diagnosis in the medical clinic of Leipsic. The author has taken particular pains to emphasize the fact that, besides availing one's self of the constantly increasing finer methods of diagnosis, the simple use of the senses is not to be forgotten; still more, that labors with the microscope and in the laboratory are not to govern to the exclusion of more practical methods. In other words, in diagnosis as in therapeutics, it is imperative that each individual case shall be specially studied in all its bearings.

Since the work of Da Costa there has been nothing presented in the English language devoted to Diagnosis that is so complete, so concise, so practical. The subject matter has been brought up to date at every point, and the volume throughout is well illustrated.

An American Text-book of Gynæcology. Edited by J. M. Baldy, M.D. Cloth; royal 8vo; pp. 800. Price, $6.00; sheep, $7.00; half Russia, $8.00. Sold by subscription only. W. B. Saunders, Philadelphia, Pa.

In this volume all anatomical descriptions excepting what is essential to a clear understanding of the text have been omitted, illustrations being depended upon solely for elucidation. It is thoroughly practical in its teachings, a working text-book for physicians and students. A clear line of treatment has been laid down in each instance, and the operations recommended are fully illustrated, so that the reader cannot fail to grasp the idea. All extraneous matter and discussions have been carefully excluded, and the subject matter has been brought fully up to date at every point. The work is as nearly as possible the combined opinion of the ten specialists who figure as the authors. It is well illustrated throughout with wood-cuts, half-tone and colored plates, mostly original, selected from the authors' private collections.

Vick's Floral Guide, 1894.

It contains descriptions that describe, not mislead; illustrations that instruct, not exaggerate. This year it comes to us in a suit of gold, printed in eight different colors besides black. Colored plates of chrysanthemums, poppies and vegetables. On the front cover is a very exquisite bunch of Vick's new white branching aster, and on the back is the new double anemone; 112 pages filled with many new novelties of value as well as all the old leading varieties of flowers and vegetables.

We advise our friends who intend doing anything in the garden this year to consult Vick before starting operations. Send 10 cents to James Vick's Sons, Rochester, N. Y., for Vick's Guide; it costs nothing, as you can deduct the 10 cents from first order. It certainly will pay you.

McClure's Magazine. Price, 15 cents; $1.50 a year. S. S. McClure, Limited, New York City.

In the February number is begun a new serial entitled "The Ebb-Tide," by Robert Louis Stevenson and Lloyd Osbourne. "Human Documents" comprises portraits of Robert Louis Stevenson, Hamilton Garland, and Philip D. Armour; likewise there is an exhaustive study, profusely illustrated, of the life and character of the latter gentleman. There is also a charming story of "Western Life," by Mrs. E. V. Wilson, and an interesting account of the erection of the scientific observatory on the summit of Mont Blanc.

A Practical Treatise on Nervous Exhaustion. By George M. Beard, A.M., M.D. Cloth; 12mo; pp. 262. Price, $2 75.

Neurasthenia is now almost a household word; and the work Doctor Beard has done in elucidating the symptoms, natural sequences, and treatment of neurasthenia, is the foundation of every similar work since his day. His labors are too well known to require comment. The present volume presents the third enlarged edition, with notes and additions by A. D. Rockwell, A.M., M.D., who is in himself an authority upon this same subject.

Essentials of the Practice of Medicine. By Henry Morris, M. D. Cloth; 16mo; pp. 440 (double number). Price, $2.00. W. B. Saunders, Philadelphia.

The fact that this small manual of the practice of medicine has passed through three editions would appear sufficient guarantee of its popularity. The volume is intended as an aid to the advanced student of medicine

who is preparing for his degree, and for the young practitioner who is essentially weak in diagnosis.

DEMOREST'S FAMILY MAGAZINE. Price, 20 cents; $2.00 per year. W. Jennings Demorest, New York.

The February is the St. Valentine number, with an appropriate water-color picture as a frontispiece. The contents are exceptionally good, there being a continuation of "The Road to Fame or Fortune;" "Our Baby Prize," illustrated; "Nemesis;" and an exhaustive paper, illustrated, devoted to the most prominent society ladies of New York. There are the usual editorials, correspondence, etc., etc.

HOW TO USE THE FORCEPS. By Henry G. Landis, A.M., M.D. Cloth; 12mo; pp. 203. Price, $1.75. E. B. Treat, New York.

Some of the statements made in this volume differ radically from accepted teaching, yet they are in no way amiss as presenting different sides of a moot subject; moreover, they have in their support agreement with known anatomical facts given in their elucidation, and likewise phenomena familiar to every well posted obstetrician. The volume is edited by C. H. Bushong, M.D.

BOOKS RECEIVED.

LOCAL ACTS OF MICHIGAN. Session of 1893. State Press, Lansing.

TWENTY-THIRD REGISTRATION REPORT, VITAL STATISTICS 1891. State Press, Lansing.

Therapeutic Brevities.

Tincture of Cantharides for Epithelial Nephritis.— Professor E. Lancereaux, of Paris, in 1867 differentiated and demonstrated the lesions of interstitial and epithelial nephritis. Subsequently he divided the interstitial form into a number of groups, viz.: *Toxic*, *pyretic*, and *nephritis a frigore* (large white kidney). He says: "As pathological anatomy teaches that anuria results from tumefaction of the tubuli contorti, I was induced to try tincture of cantharides as an agent capable of modifying these conditions, for the reason it acts directly upon the lesion of the secretory element, and does not prevent the use of drastics as soon as the phenomena of auto-intoxication appear. I had before used it in some other renal affections and demonstrated its action upon the tubuli contorti by experimentation."

In one case of epithelial nephritis which came into his hands, the quantity of urine was from twenty to twenty-six ounces daily, with high specific gravity, much albumen, hyaline and epithelial casts; there was marked anasarca. After purgatives, digitalis, milk diet, etc., had failed to give relief, tincture of cantharides was employed, beginning with six drops, increased two days later to ten drops, in the twenty-four hours. In three days the urine increased; ten days later the anasarca disappeared; at the end of six weeks the patient was discharged. The albumen entirely disappeared within six months, and at intervals during the succeeding four years examination of the patient proved recovery to be complete. Doctor Lancereaux cites several cases equally satisfactory in which cantharides was employed.

Bichromate of Potassium as an Expectorant.—Some years since Doctor Hutchins recommended Potassium bichromate in the treatment of bronchitis, particularly in young children, employing a solution prepared fresh each day in which three-fourths of a grain, after being rubbed up with five grains of sugar of milk, was triturated in 2½ ounces of water.

Recently Doctor Hutchins' observations have received corroboration from Doctor Drysdale (*Revue de Thérapeutique*) and Doctor J. E. Weaver (*Medical Record*). The former declares the drug is well borne even by the youngest infant if it is administered a few minutes after eating or drinking. If there is oppression and suffocation, in a child say one year old, a dose of one-twentieth ($\frac{1}{20}$) grain should be given, to be followed, hourly, by smaller doses. The daily maximal dose should not exceed one-fourth ($\frac{1}{4}$) grain, though he has at times administered more without observing any ill effects. When the remedy is rejected by the stomach, as occasionally happens, it produces neither nausea nor phenomena of irritation.

Doctor Weaver considers potassium bichromate useful not only in affections of the upper air-passages, but likewise in tonsillitis. In laryngitis and bronchitis he uses not more than one grain well triturated with six drachms of water, giving a teaspoonful of this solution every one-half to two hours; in tonsillitis he advises to add the finely powdered bichromate to water until the latter is of a dark brown or light orange shade—a teaspoonful to be administered every hour. If nausea should appear, the dose is to be diminished and given less frequently.

The minimal dose of potassium bichromate for a child of one year of age is one milligramme ($\frac{1}{64}$ grain).

Liquor Sedans.—This preparation embodies three essential drugs, to wit:

Viburnum prunifolium: Hydrastis Canadensis: Jamaica dogwood.

Viburnum prunifolium is a most complete utero-ovarian tonic and sedative, and moreover appears to exert a specific action with tendency to regulate function. These are attributes that are combined in no other single drug.

Hydrastis Canadensis is tonic and sedative to mucous tissue, and likewise to striated fibre.

Jamaica dogwood is a powerful sedative, manifesting itself chiefly in the ovarian tract with reflex tendency to the uterus. Moreover it is a general analgesic, antispasmodic, and carminative.

The combination of these three drugs is therefore available in greater or less degree in all affections of the uterus and ovaries, and beneficial in proportion to the character of the malady. It is also sometimes quite specific in certain forms of dysmenorrhœa, menorrhagia, etc. There is perhaps no malady referable to the utero-ovarian tract in which its use may not be recommended with a certainty of at least ease and temporary benefit. —*Stockwell.*

Gonorrhœa in Women.—Doctor Brose treats acute cases by douches of chloride of zinc or sublimate, the urethra receiving one- to five-per-cent. solutions of nitrate of silver by injection. In local treatment the cervix demands attention, and the application of strong solutions of chloride of zinc (to 50 per cent.) has been followed by the best results, although the practice is not without danger. Intra-uterine applications are likely to be followed by salpingitis and pelvic peritonitis, and are rarely necessary. Relatively dangerous is the washing out and injection of the uterine cavity with remedies designed to disinfect it; a harmless and proper method is the application of caustic remedies upon a sound wrapped with cotton, or in the form of pencils; or the method of Fritsch may be employed—mechanical dilatation of the uterus and packing the cavity with strips of gauze wet with a two-per-cent. solution of nitrate of silver, repeated daily for two weeks. The chronic urethritis is treated through the endoscope by a five- to twenty-per-cent. solution of nitrate of silver.—*Deutsche Medicinische Wochenschrift.*

Passiflora Incarnata and Solanum Carolinense.—This plant, better known as passion flower and May pop, is accredited by the *Augusta Medical Journal* with affording successful results, when employed in the form of a fluid extract, in epilepsy.

Doctor I. J. M. Goss remarks he has used fluid extract Passiflora in the nervousness of children teething, and that it quiets without any narcotic effects; also that it is soporific without after-effects. He deems it the most valuable remedy in nervous excitability, and of benefit in the spasms of children, likewise good in the delirium of typhoid fever.

For epilepsy, he remarks, a full dose should be given at bedtime, especially where the attack comes on at night, and during the day the patient should take one drachm of Horse Nettle before meals to prevent the flow of blood to the brain and spinal centres.

As a nerve sedative Passiflora is preferable to opium, and as a soporific it is preferable to either opium or hyoscyamus.

Cerium Oxalate for Hyperemesis Gravidarum.—Cerium oxalate has been resorted to in obstinate cases of the vomiting of pregnancy. Charlton gave it for morning sickness with unvarying success. Doctor James adds: "It very seldom fails when given in good-sized doses. My experience is that it is the specific in this condition, and that it will act when everything else fails. Mrs. G—— had suffered morning sickness and excessive vomiting for three months. During the last month the vomiting had been such that nothing could be retained on the stomach. She had lost in weight and strength, was scarcely able to be out of bed, and thought she would die this time. I prescribed at once cerium oxalate, and when I called next day the vomiting was checked; she had a desire to eat, retained her food, and expressed great joy."—*Medical Times.*

Hæmorrhoids.—As many sufferers are business men who cannot afford to lose a week in bed, Doctor Didama remarks, in the *Journal of the American Medical Association*, that such may be relieved comparatively painlessly by:

Anæsthesia: Abundant digital dilatation of the sphincter, which is often a prolonged relief: Bringing down the tumors: Ligating those which have a suitably small pedicle, and tying the ligature with a bow knot: Injecting into each tumor, according to its size, six drops or so of a mixture of carbolic acid one part, eight-per-cent. solution cocaine two parts, glycerin two parts: Untying and removing ligatures after removal of the injection, and coagulation of the blood in the tumor, which may require from five to ten minutes.

Hot-Water Drinking.—There are four classes of persons who should not drink large quantities of hot water: People who have irritability of the heart, since in such it induces palpitation: Persons with dilated stomachs: Those afflicted with sour stomachs: Those with soreness of the stomach, or pain induced by light pressure.

These rules are not for those who take hot water simply to relieve thirst, but for such as employ it to wash out the stomach. Hot water will relieve thirst better than cold, and for that purpose is not to be condemned. It is, however, an excitant, and in cases where irritation of the stomach exists should be avoided.—*Popular Science Monthly.*

Wintergreen Oil for Alopecia.—Doctor Hallopean reports great success with this remedy combined with three parts of ether. "For experimental purposes it was applied only to one side of the head, essence of canella being used for the other side." After five months of treatment the difference between the two sides was very marked, that to which the *Oleum Gaultheriæ* was applied being almost healthy, while the other exhibited only downy hairs. The remedy provoked neither pain or redness of the skin, in favorable contrast to most parasiticides, which are powerful irritants.—*British Journal of Dermatology.*

Infantile Convulsions.—Jules Simon recommends emptying the digestive tract by an enema, and provoking vomiting by tickling the fauces. If the attack continues, resort to ether or chloroform on a handkerchief. Administer by mouth, or enemata, repeated doses of chloral hydrate and bromide of potassium, each fifteen grains; syrup of codeine, ten drops; tincture of musk, ten drops; tincture of aconite, ten drops; orange-flower water, three ounces and a half—this quantity suffices for twenty-four hours. When the attack is very grave, give a warm bath and apply a blister to the back of the neck or the epigastrium, leaving it in place three hours.

An Antidote to Organic Poisons.—Antal experimentally examined the properties of potassium permanganate as an antidote to certain organic poisons, and found that those animals to which muscarine, strychnine, colchicum, oil of savin, and oxalic acid had been given, speedily followed by the administration of a one-third to one-half per cent. solution of permanganate, recovered; whereas animals similarly poisoned, but without resort to this antidote, succumbed. Antal therefore suggests the use of permanganate in the human subject when poisoned by one of the foregoing substances.—*British Medical Journal.*

Snuff for Acute Coryza.—The following is highly recommended for the relief of "cold in the head:"

℞ Menthol, 6 grains.
Powdered boracic acid, 2 drachms.
Subnitrate of bismuth, } each 3 drachms.
Powdered benzoin, }

A good-sized pinch of this may be snuffed up five or six times a day. If desired, one grain of morphine and half a drachm of calomel may be added, the addition apparently increasing its efficacy in certain cases. —*Exchange.*

Sour Wood.—*Oxydendron Arboreum* grows in the Southern States to a height of from ten to thirty feet. A tincture made from the leaves is a most active diuretic, greatly increasing the watery portion of the urine; and it also stimulates digestion and acts as a tonic. The dose of the tincture is one drop administered as required. So far, no close distinction has been made as to the class of cases in which it acts most beneficially—whether in general dropsy from functional disorder, or from other causes, as from organic heart disease.—*Chicago Medical Times.*

Chilblains.—Surgeon's plaster is a simple and reliable remedy; it is especially serviceable when the feet are attacked, and is easily applied to the big toe and heel. A salicylated plaster is of great value, as it helps any decorticated spots to heal. The plaster is applied, and allowed to remain on for three days, when the trouble will be found cured. After this it will possibly have to be renewed on account of soiling easily. It may be used on the hands of cooks and those who work in water.—*Northwestern Lancet.*

Insomnia of Children.—Jules Simon, in *L'Union Médicale*, recommends the employment by enema of:

℞ Chloral hydrate, 2 grains.
Tincture of musk, } ää 20 minims.
Tincture of valerian, }
Distilled water, 1 ounce.

He employs the entire quantity at one injection, and repeats in an hour or two if sleep does not intervene.

Medical Progress.

ANALYSES OF "CEREBRINE" AND "MEDULLINE."—*Apropos* of these so-called "animal" or "organic" extracts, J. H. Long, of the Northwestern University Laboratories, Chicago, writes the *Journal of the American Medical Association* as follows:

At a meeting of the Chemical Section of the Chicago Academy of Sciences, held two months ago, Prof. M. Delafontaine, of this city, presented some facts regarding tests of the substances known as "Cerebrine" and "Medulline," and somewhat more in detail than in the note in the *Journal* of August 26th. This work having been criticised in certain quarters, both as regards methods and conclusions, I thought it worth while to make a new examination of the question, avoiding as far as possible sources of error. I accordingly obtained from a well known Chicago druggist a bottle of each of the two Hammond preparations, which I tested, with results agreeing fully with those of Prof. Delafontaine. These tests I considered, however, only as preliminary to more extended ones. For the fuller tests I secured through one of our leading wholesale drug houses four bottles of "Cerebrine" and four bottles of "Medulline" direct from the Columbia Chemical Co., 90 South Fifth avenue. These bottles came packed in a small box which was handed to me unopened. Each small blue bottle was in a dark red pasteboard carton, labeled "Sterilized Solution of Cerebrine" and "Sterilized Solution of Medulline," with the name "William A. Hammond" in *fac-simile* printed diagonally across it in red ink. The cartons had not been opened, which was shown by the unbroken labels. The bottles themselves were sealed with some kind of white wax, apparently paraffin, and were each found to contain about four cubic centimeters of a sweetish liquid consisting mainly of glycerin and alcohol.

I carried out special tests as follows:

The contents of two bottles of "Cerebrine" were poured into a small flask and extracted with pure benzol in two operations, using twenty cubic centimeters each time. The united extracts were evaporated spontaneously; a small oily residue left was treated with water, warmed on the water bath and used for tests. A portion of this aqueous mixture gave a strong test for nitrates with diphenglamine and sulphuric acid; another portion gave the nitrate test with ferrous sulphate and sulphuric acid. Another portion failed to give the *nitrite* test with naphthylamine and sulfonitic acid. The remainder of the aqueous liquid was saponified with sodium hydroxide and then tested for nitrates and nitrites, both of which were found in decided quantity. The benzol, sodium hydroxide, sulphuric acid and acetic acid used in these tests were pure and free from even traces of nitrates or nitrites, as I found by careful special examination.

The reactions given above show the presence of an organic nitrate (not nitrite) in the liquid, and the behavior on saponification is strongly suggestive of nitro-glycerin. The fact of the solubility of this nitrate in pure benzol is important.

I next dissolved the contents of one bottle of "Cerebrine" in ten cubic centimeters of water and made tests for alkaloidal bodies. With solutions of mercuric-potassium iodide and iodine in potassium iodide, no precipitation whatever occurs. Platonic chloride, picric acid and phosphomolybdic acid give a very slight haziness; with mercuric chloride a marked cloudiness is produced. These tests I consider sufficient to show the absence of animal or other alkaloids.

Four bottles of "Medulline" were next mixed and extracted with pure benzol; an oily residue remained on evaporation of the benzol. This residue was dissolved in alcohol and treated with ammonium sulphid. A finely divided precipitate of sulphur settled out. The excess of ammonium sulphid was removed with pure zinc sulphate, and the filtered liquid tested for nitrites; a strong reaction was obtained. This test, like those given above for the "Cerebrine," is characteristic of nitro-glycerin and strengthens those obtained in my preliminary tests. Taking all tests into consideration, I am of the opinion that the preparations "Cerebrine" and "Medulline" contain nitro-glycerin as their active ingredients, as stated by Delafontaine and others.

MUSHROOM POISONING.—In the literature on the subject of mushrooms there may be found a most vivid description of the agonies endured by one who was nearly killed by mushroom poisoning. There is every reason to believe that the sufferings of some (if not all) of the unfortunate victims referred to were very great, independent of fatal results. It is a very common practice to distinguish between mushrooms and toadstools, the latter name indicating presumably any kind of fungus of the mushroom shape other than the ordinary edible one. Another popular practice is to assume the validity of some simple test, independent of eating it, to determine the edibility of a fungus. Both

these ideas are quite wrong. No distinction between mushrooms and toadstools is admissible, and the mushroom gatherer of this vicinity confining his harvest to the field mushroom, or *Agaricus campestris*, often passes over other mushrooms which are perfectly edible, but of whose innocuousness he has no assurance.

The mushrooms proper are classified largely by the nature of the under surface of the head. In the *Agaricus* division this part is filled by radial plates, familiar to us all in the ordinary mushroom. In other divisions this part has a different structure. The number of varieties is very great, and the number of edible varieties is also far greater than usually supposed. The assumption that there is a universal and simple test, other than eating, for mushrooms, is an error. One of our leading chemists, a great lover of mushrooms, adopted the following test for them: To determine whether an untried fungus was edible, he would cook and eat a piece the size of a silver dime; if this produced no effect, he would prepare and eat a piece as large as a silver dollar; if this produced no effect, he would consider that fungus a safe one. The fact of the case is, that the only way to know whether a fungns is edible or not is to distinguish it by its appearance—in other words, to know it when seen. One of the troubles incident to the determining of the edible species is that in the *Agaricus* division, characterized by the radial plates formed in the under surface of the head, some of the most poisonous species fall.

Hence this identification by the radial plates in itself is of practically no value, and might lead to dangerous results. One system of testing consists in ascertaining if the suspected fungus will discolor a silver spoon. This test is absolutely without value. It is also probable that any chemical test which may be devised for determining the presence of poisonous alkaloid will yield in simplicity and in directness to the simple identification of the species found. In different parts of the world, different mushrooms are selected for eating, varying greatly in flavor and other qualities. Here the field mushroom seems most in demand, as only a few experts ever go outside of the one individual species. The moral of the whole matter is, that in gathering mushrooms care should be taken and absolutely no doubt should be allowed to exist as to the identity of the species collected. Experience not only proves the danger incident to mushroom gathering, but it also shows the ease with which the proper fungus can be identified even by children.—*Scientific American.*

WHAT THE LAITY OWES TO THE PROFESSION.—In our strictures upon any of our professional brothers who, Jonah-like, fly from the duty they have prepared themselves to perform, or who, like the wandering children of Israel, wearily gazing at the bleak and barren hills of the wilderness and its interminable extent, again yearn for the watered plains, rich fields, and the plethoric fleshpots of Egypt, we should not forget that it is the public ignorance, stupidity, and its demands for anything but what is rational, that too often either leads or drives these men into adopting methods which they themselves condemn. Too many are like Shakespeare's poor apothecary of Verona, whose poverty, but not their will, consents. Many men attempt to make a living in a manner consonant with their ideas of what is proper and according to the ethical dictates of their conscience, long putting up with neglect, privation, and actual want, only to find that they receive from the public neither the recognition, support, or encouragement to which their position entitles them. They see the ignorant pretender, and the unadulterated and headcheese-brained but otherwise sharp and unscrupulous quack, roll in wealth; they see that it is taffy and glitter that catches, and that most people are but easily-caught gudgeons. The demand for fictitiousness and humbug, for imposition and clap-trap, is too real and imperative to be ignored or neglected by all. Our social life is made up of too much fictitiousness, and even Christianity and the church follow suit in too large a measure. The majority seem to spurn anything like a truthful, solid, and stable foundation. Talmage and Bishop Potter sound the praises of the "Keeley cure" as if they were chanting a *Te Deum*, and the lesser lights in theology support quackery in all its forms. It would really seem as if the conditions of social and moral life that in the end engendered the pessimism that preceded the explosion of the era of anarchy that constituted the French revolution, were now taking deep root among us, and even coming upon us in too full a force. A too riotous and licentious ignorance cannot bear other than evil fruit.—*National Popular Review.*

VAGINITIS FROM BESTIALITY.—The patient was "a smart, pretty, well educated" twenty-six-year-old country girl, who was found to be suffering from a profuse, thick, sticky, greenish-yellow vaginal discharge of an extremely offensive odor, completely gluing the parts together. The discharge had been present about a week, coming on suddenly.

After washing the external genitals and opening the labia, three rents were discovered, one through the fourchette and two through the left nymphæ. The vagina was found to be excessively congested, and covered with bleeding points on the least irritation. Gonorrhœa was the presumptive diagnosis, but coitus was denied, albeit menstruation was stopped, and the patient was terribly perturbed about pregnancy. Under pressure, she confessed that one day she was playing with the genitals of a large dog. She became excited and thought she would have slight connection with him, but after the dog had made an entrance she was unable to free herself from him, as he clasped her so firmly with his fore legs. The penis soon became so swollen the dog could not free himself, and for more than an hour she made the most persistent efforts to do so, finally making the ruptures before spoken of, which were followed immediately by the discharges and inflammation.

She was given the usual treatment for gonorrhœa, enjoining rest and soothing treatment until inflammation had subsided, since which time every kind of injection and treatment, applied both to the vagina and uterus, has failed to cure the discharge, pus cells being still abundant in the discharge; menstruation is normal. There was reason to suspect that the bestiality was continued. The case is not unique, as Dr. I. C. Rosse (*Virginia Medical Monthly*) reports that a young white single woman was surprised copulating with a large mastiff, whose efforts to release himself caused fatal vaginal hæmorrhage. The bony structures of the dog's penis, and the reversal attempted after completion of the canine sexual act, would be very likely to inflict wounds of the kind described in the first case.—*Weekly Medical Review.*

Cholera and the Holy Well at Mecca.—Mr. E. Frankland, writing to the *Times* (London) on the condition of the water of the holy well of Zem-Zem, used by Mahometan pilgrims at Mecca, says:

"A sample of the water came to me through the India Office. It was full of dead microbes, and contained, in an equal volume, considerably more animal matter than is found in average London sewage. In addition, it afforded evidence of previous pollution with an amount of such matter at least six times as great as that contained in an equal volume of average London sewage.

"The water has been again, quite recently, analyzed by Colonel Bonkowski Bey, consultant chemist to His Majesty the Sultan of Turkey. His results confirm my own analysis. They show that the water is still abominably polluted by excrementitious matters. The surroundings of this well are such as would be likely to impart to the water these dangerous ingredients. Mecca appears to have no sewerage system, all foul matters being buried in the earth within or near the city. Hence the foulness of the water percolating into the well through this mass of corruption. Colonel Bonkowski Bey informs me that Mecca is supplied with water of excellent quality; but of course the pilgrims are bound to drink at the holy well. Tens of thousands of pilgrims continue to die of cholera at Mecca, and to spread the disease elsewhere, but, as far as I know, no measures are taken to prevent pollution, and Mecca continues to be a cholera centre."—*Scientific American.*

A New System of Cremation.—A new system of cremation invented by Richard Schneider, of Dresden, Saxony, has been instituted at Cypress Lawn Cemetery, San Francisco. Under this system fuel is put into a gas regenerator and lighted, and when the gas is formed it is mixed with air. During the process of combustion the flame heats the fire-bricks which wall the incineration chamber, and the products of combustion, after passing through the chamber and a fire-clay grating, are carried through a flue. After the fire has been burning for some hours the regenerator becomes bright red and the incineration chamber shows a white heat. Then the operation of reducing the human body to ashes is commenced. The corpse is placed in a marble sarcophagus, which stands in a niche at the right of the main auditorium of the crematory. A button being pressed, the body is lowered by machinery into the preparation room, where it is stripped and wrapped in a sheet soaked in alum-water. It is placed in an iron receptacle, the bottom of which is covered with a solution of alum and water. The door of the incineration chamber is then swung open and the body given to the consuming heat. Through an opening in the door of the chamber the official in charge of the operation closely observes the progress of incineration, and when it is complete he reverses the gas and air valves, and the ashes fall into the ashpit of the crematorium. No fire is visible. A rosy light, the product of more than 2,000 degrees of heat, plays around the shrouded form. No sight could be more impressive, few more beautiful.—*Scientific American.*

FRAGMENTATIO CORDIS.—According to a report of Oestreich to the Society for Internal Medicine (*Deutsche Medicinische Wochenschrift*), fragmentation of the heart is much more common than has been supposed, and can be recognized, not only by the microscope, but macroscopically, by a peculiar friability of the muscular substance. If the fragmentation occurs in any part of the heart more than another, it is always in the papillary muscle of the left ventricle. It is not a cadaveric process, but occurs ante-mortem, as shown by experiment upon animals and the examination immediately after death of the hearts of criminals who had been hung. It may occur alone or with other affections. He considers it an "agony product," a mechanical breaking up of the primary muscular bundles as the result of the final cardiac efforts. Accordingly, it can in no case be considered during life as an actual disease. It was found especially frequent in cases of sudden death and chloroform poisoning. It is more frequent in old persons than in young, and was never seen in children under one year.—*Boston Medical and Surgical Journal.*

LIMITATIONS OF CÆSAREAN SECTION.—Dr. Robert A. Murray, in the *American Journal of Obstetrics*, declares Cæsarean section should always be performed where the conjugata vera is below 2¾ inches; it should be done in the Roberts or Naegele pelvis with marked deformity, or where there is fixation of one or both sacro-iliac synchondroses from disease —cases in which pubiotomy would be ineffective. It is the best operation, with diameters even larger than 2¾ inches, when a living child could not probably pass if a pubiotomy were done. Where tumors or exostoses are present, the section or Porro operation is the best. In cases of cancer of the cervix it should be chosen rather than pubiotomy, and be done before labor sets in, so that no sepsis may result. The size of the child's head, in moderate contractions at the superior strait, will oftentimes be the determining factor as to whether an elective Cæsarean section or a pubiotomy is the best operation.

FEEDING IN FEVERS.—Peabody (*Medical Record*) believes that in all kinds of illness, and especially in fevers, attention must be paid to the appetite and desire of the patient. If a patient is really hungry, solid food of a properly selected kind, in judicious quantities will rarely disagree with him. There is less danger of doing harm to an ulcerated ileum in typhoid fever by giving finely divided egg, beef, or chop, than by giving milk. He habitually gives his patients with typhoid, who are hungry, such food. He believes it is a mistake to withhold solid food merely because a patient has fever, and that it is incorrect to regard milk as a fluid food. Milk will always remain the most serviceable general food in disease: but when it fails to nourish the patient, where it is not well borne, where it cannot be taken for any reason, it is well to remember that efficient adjuncts and substitutes are within reach.—*Gaillard's Medical Journal.*

HOME-MADE CELLULOID.—The following process makes a substance as transparent as pure glass, at the same time very pliable and strong:

Dissolve four to eight parts of gun cotton in a mixture of alcohol and ether, in a proportion of one of gun cotton to 100 of combined liquid, after which add two to ten per cent. of castor oil, or any other oil unsiccative, and four to ten per cent. of Canada balsam. Flow this mixture onto a glass plate, and dry in a current of air at 50° F. The result is a leaf of hard substance as transparent as glass, and very nearly unbreakable, resisting perfectly the action of all salts, acid and alkalies.—*Scientific American.*

THE AGE OF MATURITY.—Statistics are said to show that young men do not, on the average, attain full physical maturity until they arrive at the age of twenty-eight years. Professor Scheiller, of Harvard, asserts, as the result of his observation, that young men do not attain the full measure of their mental faculties before twenty five years of age. A shrewd observer has said, "Most men are boys until they are twenty-five." This accords with the standard of manhood which was fixed at thirty among the ancient Hebrews and other nations.—*Scientific American.*

DEAFNESS FROM MUMPS.—Doctor Hal Foster, of Kansas City, reports in the *Medical Record* a case of deafness from mumps coming on suddenly in a boy aged four years. The disease, in spite of all treatment, has remained absolute. Nothing abnormal can be found either with the nervous system or with the ears, and the deafness is undoubtedly due to some peculiar metastasis by which the labyrinth is affected.

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Original Articles.

THE NERVE THEORY OF MENSTRUATION.*

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I propose to submit for consideration a number of arguments in support of the view that menstruation is a process directly governed by special nerves emanating from a special centre. Let us first study the process from the clinical aspect.

At the outset we are struck by the extraordinary periodicity of the process. The average healthy woman, from the age of fifteen to the age of forty-eight, menstruates regularly once every twenty-eight days; the menstrual clock is, so to speak, wound up to go for thirty-three years, and strike once every lunar month. I submit that this rhythm of function must be due to rhythmical changes in a controlling nerve centre.

Periodicity in functional activity is an event familiar to the physiologist, and in every instance known it may be traced to a periodic emission of nerve force from a special centre. The movements of the heart and the movements of respiration are examples which will occur to everyone. If the ear of a healthy rabbit be closely observed, the central artery will be seen to undergo a periodic dilatation and contraction —each cycle occupying about twenty seconds. This rhythmic ebb and flow has been conclusively shown to be due to a periodic change in the vaso-motor centre. It has been demonstrated by Professor Roy, of Cambridge, that the spleen once a minute undergoes a remarkable systole and diastole, and Bulgak has shown that this "beat" of the spleen is directly controlled by a special "splenic" centre in the cord.

Is it not also reasonable to attribute the ebb and flow of the menstrual tide to a "menstrual" nerve centre?

The onset of menstruation is characterized not only by peculiar physical changes, the sudden development of the generative organs and the mammæ, the alteration in the girl's figure and gait, but also by an equally remarkable transformation in her psychical, emotional, and mental life. The current of her thoughts is mysteriously changed. Hopes and yearnings unknown before, thrill and agitate her, and life acquires a new and deeper meaning. These profound and subtle changes are not so difficult to understand if we accept the view that puberty means the sudden bursting into activity, in the midst of the nervous system of a hitherto dormant centre.

Each recurring period produces a marked disturbance in the woman's nervous system. Even in healthy women it induces a state of increased nervous instability and excitability. Lunatics and epileptics are always worse at this time. There is one well marked form of epilepsy—menstrual epilepsy—in which the patient is the subject of seizures during the period but not during the intervals. Moreover, menstruation is too often a painful process; the agonies of dysmenorrhœa proclaim with no uncertain voice the intimate connection of the uterus with the nervous system.

Professor Stephenson has shown that menstrual life is associated with a well marked wave of vital energy, which manifests itself in a monthly fluctuation of the temperature of the body, of the daily amount of excretion of urea, and of the rate and tension of the pulse. The wave attains its maximum during the week preceding menstruation, and slowly falls to its minimum, which is reached during the week after menstruation. This wave indicates a periodic variation in the bodily metabolism, and is probably directly influenced by the rhythmical activity of the menstrual centre.

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Violent mental emotion will occasionally bring on an abrupt and premature cessation of the menses. A lady whom I knew intimately, and who had always menstruated normally, was at the age of thirty-five suddenly told some very bad news. She was unwell at the time, but the mental shock she received was so great that from that hour she ceased to menstruate and was never so again. In this case the violent emotional storm seems to have wrecked her menstrual centre.

The menopause—naturally or artificially induced—is nearly always a period of marked nervous disturbances. The woman suffers from heats and flushes, irregular palpitations, giddiness, profuse perspirations, nervous depression, etc. All these phenomena point to the close connection of the menstrual functions with the central nervous system.

How are the symptoms of the change of life produced? I believe they are largely due to a condition of instability and increased excitability of certain other cerebro spinal centres directly brought about by the failure of the menstrual centre. It is probable also that the ovaries, like the liver and thyroid gland, modify the blood circulating through them, and add to the blood some peculiar product of their metabolism. It may be that some of the climacteric symptoms are due to the loss of this substance from the system.

The uterus is supplied on each side by two plexuses, the ovarian and the utero-vaginal. The former accompanies the ovarian artery and is derived from the aortico-renal plexus. Nerves have been traced into this plexus from the last dorsal and upper four lumbar nerves. It supplies branches to the ovary, Fallopian tube, and, after communicating in the broad ligament with the utero-vaginal plexus, ends in the uterus. The utero-vaginal plexus is derived from the hypogastric, into which the "pelvic splanchnics" from the second and third sacral nerves pass. The nerves destined for the uterus are directed upwards between the layers of the broad ligament, along the side of the organ, accompanying the branches of the uterine artery; they form connections in the broad ligament with the ovarian plexus. One branch, continued directly from the common hypogastric plexus, reaches the hinder surface of the body of the uterus above the rest, and a nerve from the same source ascends to the Fallopian tube. Numerous ganglia are contained in the plexus. A large one situated on the cervix has been termed the "*ganglion cervicale uteri.*"

Doctor Arthur Johnstone describes "a large nerve trunk which runs up at a very acute angle to the body of the uterus, running in the angle between the round ligament and the Fallopian tube, from deep down in the base of the broad ligament. It enters the uterine cornu just beneath the Fallopian tube." This he believes to be the nerve of menstruation.

Nerve filaments have been traced directly into the mucous membrane of the uterus, where, according to Frankenhäuser, they end in ganglia.

The pelvic splanchnics are described by Gaskell as arising in the lumbar part of the cord, in the cells of the posterior vesicular column of Clark, and being also connected with the cells of the lateral horn of grey matter. They may be distinguished by the fineness of their fibres from other nerves. They run in the nerve roots of the second and third sacral nerves, and pass from these directly into the hypogastric plexus, without entering the chain of lateral ganglia. From this plexus they are distributed to the generative organs, and also to the bladder and rectum. They are chiefly vaso-dilator in function, that is, they transmit impulses which bring about vascular engorgement in the viscera supplied. It is probable, therefore, that they are concerned in bringing about the determination of blood to the uterus and appendages which is such a marked feature of the menstrual process.

The position of the menstrual centre at present can only be surmised; but there is reason to believe that it will probably be found in the lumbar enlargement of the spinal cord. This portion of the cord is intimately associated with all the pelvic functions. It has been proved to contain, in the human being, the centres (*a*) for micturition, (*b*) for defæcation, and (*c*) for erection and ejaculation. Experiments on animals have demonstrated that it contains a centre governing the act of parturition. If it contains a parturition centre in the bitch, there is

probably one also there in the woman. And if the parturition centre be found there, the menstrual centre will not be far away.

The centre is certainly not in the pelvis. There are ganglia in the substance of the uterus, ganglia in the nerve plexuses at the sides of the uterus between the layers of the broad ligament, and on the cervix is situated a large ganglionic mass, developed in connection with the utero-vaginal plexus, called the "*ganglion cervicale uteri.*" If these ganglia have anything at all to do with menstruation, they are certainly controlled by a higher centre.

This, I think, is certainly shown by a consideration of the menstrual functions of a curious monster born a quarter of a century ago. This "unique monstrosity" is thus described by Dr. Brook Wells in the *American Journal of Obstetrics* for 1888 (p. 1265). I have slightly condensed his report:

It is a female, belonging to the monocephalic, ileadelphic class of monsters by fusion; and is the first of its kind that has ever been reported as having occurred in the human being, though several instances have been known in animals. She in now twenty years of age, well formed and single above the waist, with normal upper extremities. Below the waist the body broadens out, so that there are two navels and it bifurcates into two pelves, from which spring four lower limbs. The spinal column divides at the third lumbar vertebra. The adjoining ilia of the two pelves are fused together. There are thus two pelvic arches supporting the four legs, two pubes, two montes Veneris, two perfect sets of external and internal female generative organs, two bladders, two ani, and two lower intestines. How high up the intestines remain duplicated is not known. The organs above the waist, so far as can be determined, are normal. The two outer limbs, on which the woman walks, are well developed. The inner ones are smaller, atrophied, and below the knee rudimentary. Menstruation appeared at the usual age, is normal, and *occurs simultaneously on both sides.* She married shortly after her eighteenth birthday, and a year later became pregnant in the left uterus. In consequence of the extreme narrowness of the pelvis, abortion was artificially induced when she was between three and four months pregnant. She made a rapid recovery, and is now in good health.

Notice three points: The body was single above the third lumbar vertebra, and double below: There were two distinct independent sets of generative organs, two separate uteri: She menstruated normally and simultaneously on both sides. Now I submit that if we accept the view that menstruation takes place in obedience to the mandates of a nerve centre, this case shows that the centre cannot be either in the substance of the uterus or in any ganglia situated in the pelvis or the lower part of the abdomen, otherwise menstruation would not have occurred simultaneously on both sides. It is inconceivable that two independent menstrual centres, each in its own pelvis governing its own uterus, would have kept synchronous beat. There must have been a higher centre in the body above the point of bifurcation, governing both uteri, and bringing about the process of menstruation in each at exactly the same time.

A similar line of reasoning will show that ovulation cannot be the cause of menstruation, for it is most improbable that Graafian follicles would rupture in different ovaries, in different pelves, month after month at the same time.

Menstruation is a function peculiar to the human female and the higher apes. So far as I am aware, no experiments bearing on the phenomena of menstruation have as yet been performed on living apes. But numerous experiments on other animals have been recorded which are of value to us, in that they demonstrate that the contractions of the uterus and the variations in its vascular supply are directly under the control of the central nervous system.

According to the researches of Körner, Röhrig, and others, the uterus is supplied by two sets of motor nerves: (*a*) Fibres derived from the abdominal splanchnics pass through the abdominal and hypogastric sympathetic plexuses to the uterus; stimulation of these fibres causes contraction of the circular muscular fibres of the uterus: (*b*) Fibres leave the spinal cord by the second and third sacral nerves, and run in the pelvic splanchnics to the uterus; stimulation of these fibres causes contraction of the longitudinal muscular fibres of the uterus.

Gaskell's researches tend to show that the vaso-motor fibres destined for the uterus leave the spinal cord by the anterior roots of

the lower dorsal and upper lumbar nerves, pass through the *rami viscerales* to the lateral chain of sympathetic ganglia, where they become non-medullated. They pass through the sympathetic plexus to the uterus. The vaso-inhibitory fibres leave the spinal cord by the second and third sacral nerves, and pass through the pelvic splanchnics to the uterus.

Active contractions of the uterus may be induced: by direct stimulation of the hypogastric plexus (Frankenhäuser); by stimulation of the pelvic splanchnics (Von Basch and Hofmann); by direct stimulation of the lumbar part of the spinal cord (Speigelberg).

The uterus may be made to contract reflexly, by stimulating the central end of the sciatic nerve (Von Basch and Hofmann); by stimulating the central end of the brachial plexus (Schlesinger); by stimulating the nipple.

Körner has shown that in the bitch there is a centre for the act of parturition situated in the spinal cord opposite the first and second lumbar vertebræ.

These investigations on the lower animals demonstrate an intimate connection between the uterus and the nervous system; and, whilst they do not *prove* anything with regard to the menstruation of the human female, they harmonize with and strengthen our belief that this function of the uterus is likewise controlled by special nerves emanating from a special centre.

As a contribution towards the explanation of the nerve mechanism of menstruation, let us consider Gaskell's theory of katabolic and anabolic nerves. He believes that the active tissues are supplied by two sets of nerves—katabolic and anabolic.

A katabolic nerve stimulates the destructive metabolism which is always going on in a tissue; it brings about a liberation of energy, followed by exhaustion. Examples of this may be found in the motor nerves of muscles, the accelerator nerve of the heart, and the sympathetic nerve to the submaxillary gland.

An anabolic nerve is the exact opposite of the katabolic in function; it subserves constructive metabolism, produces repair of tissue and building up. Examples of this are found in the cardiac branches of the vagus, the chorda tympani, and the so-called trophic nerves.

In the case of the uterus I believe that during the interval between the menstrual periods the organ is under the control of anabolic nerves. It is engaged in a constructive metabolism, preparing a decidua, building a nest for the expected egg. But should impregnation not occur within a definite period, the katabolic nerves assert their influence and what is called menstruation occurs. The actively growing cells of the endometrium undergo a rapid destructive metabolism, the fabric of the half-formed decidua tumbles to pieces, the turgid capillaries burst and pour out the menstrual flow, which sweeps away the useless tissue débris. Then the uterus comes once more under the formative power of the anabolic nerves, and the whole cycle is repeated. But should impregnation take place, the anabolic influence is augmented and continued until the close of gestation; constructive metabolism goes on uninterruptedly, and the uterus actively grows. Menstruation—being a katabolic process—is in abeyance. But at the end of the nine months of gestation, katabolic forces gain the upper hand, and parturition takes place, and then the uterus, by the process of involution (a destructive metabolism), slowly returns to its normal condition.

If the uterine appendages on one side only be removed, menstruation is not interrupted. If they be removed on both sides, the operation brings about cessation of menses in about ninety-five per cent. of the cases; this artificial menopause is accompanied by the same peculiar nervous disturbances which characterize the natural climacteric.

By what means does this operation arrest menstruation? It is not by bringing about the cessation of ovulation. The observations of Ritchie, Reeves Jackson, Lawson Tait, and A. Clark, have proved beyond dispute that ovulation is not the cause of menstruation. Ovulation may and does take place independent of and in the absence of menstruation, and menstruation may continue regularly and profusely after the complete removal of both ovaries. At the same time, I do not assert that the ovaries have no influence at all on the uterus. It is possible that they may influence the uterus re-

flexly—through the menstrual centre—the afferent nerves running in the ovarian plexus. I have already hinted that it is probable that the ovaries add to the blood circulating through them some peculiar product of their metabolism, and that it is to the loss of this substance from the blood that some of the symptoms of the menopause are due.

Mr. Lawson Tait has advanced the view that the Fallopian tubes are the "starting-points of the process" of menstruation. "If the tubes," says Mr. Tait, "are the starting-points of the menstrual phenomena, it is not unreasonable to suppose that their removal will be a very effectual method of stopping it altogether, just as you stop the growth of a fir tree by cutting off its leader. But I never said—I never believed—that the tubes *caused* menstruation, any more than the governors of a steam engine can be supposed to drive the machinery."

Against Mr. Tait's view it may be urged that cases occur where even after the most complete removal of both Fallopian tubes menstruation continues.

Other surgeons believe that the operation acts by interfering with the arterial supply of the uterus. Professor Japp Sinclair (*British Medical Journal*, May 27th, 1893) goes so far as to assert:

If the (ovarian) arteries are tied, even though the tubes and part of the ovaries be left, involution will follow in the body of the uterus, and menstruation will cease. If the arteries be not tied, there will be profuse metrostaxis, and menstruation will continue, it may be for many months or years, even when the ovaries and tubes have been carefully removed. In operating on the broad ligament for the purpose of bringing on the menopause, the operator should endeavor to tie the chief branches of the ovarian artery.

I do not deny that the partial cutting off of the blood-supply of the uterus is a factor—but it is by no means the chief factor—in arresting menstruation. It must not be forgotten that the chief blood-supply of the uterus comes through the uterine arteries, and these are not interfered with by the operation. Moreover it is a common surgical experience that when some only of the arteries supplying a vascular area are ligated, the other vessels speedily undergo a compensatory hypertrophy, and soon the tissue is as freely supplied with blood as before. Why should the uterus be an exception to the rule?

It must be also remembered that any ligature which includes the ovarian artery will include the ovarian plexus of nerves.

Is it not more probable that the operation brings about the arrest of menstruation by severing the nerves governing the process? It must be remembered that in performing the operation the whole of the broad ligament is not included in the ligature. Therefore, if the result is obtained by a division of the menstrual nerves, these nerves must course to the uterus in the upper half of the broad ligament. It may be that the impulses are transmitted along Johnstone's nerve, though I doubt if this be as constant a structure as he would have us believe. It is probable that the ovarian plexus contains some of the fibres governing menstruation.

The failures – the exceptional cases where after complete removal of both sets of appendages menstruation continues unabated – are probably due to the fact that on one or other side the nerves take an unusually deep course in the broad ligament, and so escape. Many surgeons explain these cases by supposing that a portion of one ovary must have been left, and that the failure of the operation to check the menstrual loss is due to the malignant influence of this unfortunate scrap of tissue. But it must not be forgotten that in those very cases where the operator cannot remove the whole of the ovary, he is also unable to include very much of the broad ligament in his ligature, and so the nerves escape.

After the removal of the uterine appendages, after ovariotomy, and more rarely after hysterectomy for myoma, a pseudo-menstrual discharge sets in. This metrostaxis begins usually on the second or third day after the operation, and lasts from three to five days. It is rarely attended with pain. The discharge resembles that of ordinary menstruation. I have never seen it occur in women who have undergone ovariotomy after the menopause. It may be observed in about ninety per cent. of all cases of removal of the uterine appendages, in about sixty per cent. of all ovariotomies, and in a still smaller percentage of cases of hysterectomy for myoma. The interval that elapses between the previ-

ous period and the date of the operation has little or no influence on the character or duration of this metrostaxis. I regard the occurrence of this discharge as confirmatory evidence of the nerve theory of menstruation. It is, I believe, due to the mechanical stimulation of the end of the divided menstrual nerve by the traumatism of the operation. A series of impulses are thus propagated along the nerve to the uterus, and a pseudo-menstrual flow results.

In conclusion, let me briefly summarize the nerve theory of menstruation. There is reason to believe:

That menstruation is a process directly controlled by a special nerve centre:

That this centre is situated in the lumbar part of the spinal cord:

That the changes in the uterine mucosa during the period are brought about by katabolic nerves, and during the interval by anabolic nerves:

That the menstrual impulses reach the uterus either through the pelvic splanchnics or the ovarian plexus—possibly both:

That removal of the uterine appendages arrests menstruation by severing the menstrual nerves.

The Crescent, Birmingham, Eng.

MEDICAL SOCIETIES OF ANCIENT AND MODERN TIMES.*

When the fellow-members of a profession, united by a single purpose and by common interests, band themselves together for mutual assistance and protection, they are impelled by a need deep-seated in human nature, to which Aristotle referred when he defined man as a social animal. It is to this impulse that we owe the establishment of political institutions, as also the formation of crafts and guilds in ancient, and of societies and labor unions in modern, times; and it is one of the most important factors of our civilization.

The faint beginnings of fraternal life among medical men must be sought in antiquity. In the neighborhood of temples consecrated to the god of the healing art—the goal of pilgrims seeking help and cure, from all parts of Greece—physicians established themselves and formed societies which were described by the inappropriate name of schools. The members called themselves Asclepiades, and declared that they were the descendants of Asclepias (Esculapius), and that to them had been communicated the fund of pure and undefiled medical learning. Like the corps of ditch-diggers, florists, and other societies of the same sort, the representatives of the medical profession also presented the form of a guild, cohering by virtue of a supposed descent from some mythical ancestor.

A distinguished political economist of our own time has traced the origin of the guild back to the family, and the Asclepiades offer an example which goes to confirm his theory.

In many places, especially where a severe caste-spirit prevailed, the son was wont to follow the calling of the father; and then the knowledge and capacity of the latter was bequeathed as a precious legacy to the former. This is also the tradition of the sons of Asclepias, the Homeric heroes Machaon and Podalirios, in whose family the healing art was handed down.

When the medical renown of Asclepias, preserved by legend and augmented by the happy achievements of his posterity, finally after the lapse of centuries effected his apotheosis, it is possible that other physicians, not of his kin, asserted their relationship, thus producing the impression that they too possessed the medical secrets of the Asclepiades. The latter, moreover, according to Galen, did not subsequently limit their pupils or disciples to the youth of their own race, but received others as well, and on these was thus conferred a species of intellectual relationship with their masters. Thus the term Asclepiades became gradually more comprehensive, and was finally applied to the entire body of medical men.

Even though the fiction of a common extraction from Asclepias was maintained, and the pedigree of his alleged descendants continued, this habit was chiefly prompted by considerations of expediency, with respect to the public which demanded this act of piety from the physicians and awarded it by an augmented confidence in their capacity.

The oldest societies of Asclepiades were situate at Rhodes, Croton, Cyrene, Cos, and

* Translated by Joseph Helfman from the *Wiener Klin. Wochenschrift.*

Cnidos. There they found opportunity in their intercourse with the priests devoted to the cult of Asclepias, and with the patients who there sought cure, to learn the methods of treating various diseases and to collect a fund of medical observation and experience. Between the healing art as practiced in the temples and that of the Asclepiades, the great difference prevailed that the former sought to appear as the result of a divine revelation, and the latter as the fruit of human wisdom.

The societies of the Asclepiades were distinguished not only by the sanctuary from which they derived their origin, but also by their scientific principles. The local conditions, the character of the predominating diseases, the tendency of their theoretical explication, the intellectual standing of the individuals who were there active, and their relations with philosophical, mathematical or physical investigations or systems, gave rise to various medical sects which rivaled one another in their "love of science and mankind," as Hippocrates puts it.

He who was received into the fraternity of the Asclepiades was constrained to swear an oath that he would honor his teacher in medicine as his father, and regard his children as his own brethren; would fulfill his duties as a physician, towards his patients, faithfully and conscientiously; and would communicate the medical truths and secrets which he had received, only to his disciples and to such persons as were included in the scope of medical legislation.

The Asclepiades traversed the land; practiced their profession sometimes here, sometimes there, or settled in one place when they found a sphere inviting the activity of a life; but they always remained in close intellectual union, and gathered together at stated times in order to exhibit their cohesion at the common sacrifices and religious festivals. This is stated to be a regular custom of antiquity, in an inscription which was discovered some years ago in the ruins of the temple of Asclepias at Athens, and which probably dates back to the third century before Christ.

Among the Romans the medical profession never attained the same consideration which it enjoyed among the Greeks. This was partly due to the lack of independence and originality in the development of Roman medicine, which reveals, even in its greatest representatives, its reliance on its Greek predecessors, but may be chiefly ascribed to the elements of which the medical profession was composed. The Roman nobles despised the practice of medicine, or at the most accorded it a *dilletante* interest, in their capacity as land proprietors and slave breeders. The Roman nobility, moreover, held aloof from the other civil occupations, and looked upon politics or war as the sole worthy sphere of their activities; accordingly, the practice of medicine was, as a rule, relegated to people of meaner birth, and many physicians were slaves. These were reinforced by a number of adventurers who poured into the great world-city on the Tiber from foreign lands, especially from Greece and from the Orient, for the purpose of utilizing their medical knowledge, and who, to this end, left no mode of self-advertisement untried.

Moreover, profound distinctions prevailed among the physicians of Rome with respect to their education and professional knowledge, as also to their social position, and we can readily comprehend that between the various medical castes intimate relations were seldom evolved. While societies and fraternities were everywhere formed among the artisans and merchants (being termed Collegia in Rome), the union of physicians into a species of guild is mentioned in only two inscriptions: One is the epitaph of a deceased brother practitioner; the other bears the announcement of the primitive formation of the Collegium Æsculapii et Hygeiæ, and dates back to the year 153 A. D.

Perhaps, also, the concession of definite privileges to physicians and *Archiatri* who formed special collegia among themselves, served to prevent the formation of societies among the other practitioners of medicine, since the latter were deprived of the ablest and noblest members of the profession.

Several authors assume that the institution of guilds was transmitted by the Romans to the Romanic and Germanic peoples. It is, at all events, certain that societies of this kind existed early in the Mediæval Ages. As a result of the impotence of State power, from which effective protection against ex-

ternal and internal foes was not to be expected, and of the chaotic political or social conditions of that time, they became widespread and assumed a rôle in the public life of the people. Bearing the stamp of the religious romanticism which dominated that period, they sought the patronage of some saint who bore a certain relation to their profession. For this purpose, the physicians chose a pair of brothers, Cosmas and Damian, who had practiced under Diocletian and had suffered martyrdom on account of their Christian faith.

If the societies of physicians were at the outset content with preserving their rights as against the authorities and the public, and with aiding their brethren and followers, new motives were subsequently developed, among which the systematic conduct and supervision of medical instruction stood foremost.

The oldest high schools or academies of Europe, particularly those of Salerno and Montpellier, were a direct outgrowth of the medical guild. Although very meagre and unreliable data respecting their formation are extant, we may at least feel assured that individual masters in medicine first taught there and later united in a common cause. Thus medical schools were first originated, and to these other faculties were successively allied.

In Paris, the physicians as well as the masters of the other arts combined into organized societies as early as the beginning of the thirteenth century, with self-imposed statutes and laws. The medical guild was incorporated with the university as its medical faculty, and the conditions were similar in most of the academies which were subsequently founded.

The members of the medical guild were likewise connected with the university, even if not serving in the capacity of instructors. In their gatherings they occupied themselves not only with the concerns of their practice, but also with the requirements of medical education, and administered medical examinations. A corps of medical instructors was evolved and separated from the medical guild only when it was found necessary to secure from interruption and render stable the course of professional instruction.

Moreover, at the outset nothing was offered beyond theoretical lectures, for practical instruction at the sick-bed remained for a long time after the establishment of the universities in the hands of the medical guild, and was withdrawn therefrom only on the erection of clinical schools.

In the older statutes of the medical faculties, the students were admonished to attach themselves during the last year of their course to one of their teachers or to some other member of the medical guild whilst attending to his practice, that they might observe and acquire methods of treatment. When the polyclinic institutions for the sick poor were established in Paris during the seventeenth century, it was ordained that they should be conducted by three older and three younger members of the medical faculty. In Vienna and Prague the influence of the medical guild on professional instruction was perpetuated until the year 1848, and was not definitely abolished until 1873. In England this influence still prevails, and is manifested in a remarkable manner.

The religious character, also, impressed upon the guilds at the time of their formation, survived the Mediæval Ages. It found expression in the habit of a common visit to church on certain church festivals, and in the exclusion of dissenters or heretics from the guild. The medical guilds further received a special impetus from their identification with the universities which were cloaked with a theological mantle during the Mediæval Ages.

With the same zeal with which it was sought to maintain the purity of the religious belief among the members of the medical guild, it was endeavored to exclude elements which could not be considered as social acquisitions to the profession. For this reason, persons to whose birth or family a taint adhered—the illegitimate, the sons of condemned criminals, executioners, and, in general, those whose occupation was regarded as mean or degrading—were denied the dignity of the medical doctor's degree and reception into the guild.

There was little cordiality in the relations between physicians and surgeons.

The separation of internal from external medicine, hinted at as early as Homer, prob-

ably had its cause in the differing evolution of these two parts of the healing art, the one originating from mysticism, the other from empiricism. But the division of these two classes of physicians was not supported in antiquity by law, but rather by tradition. The surgeons were equal to those who ministered to internal disease, in learning and training, and occupied the same position in social life.

This condition underwent no material change until the Middle Ages, when the clergy were forbidden to practice surgery by their church superiors, and when the value of all practical occupations sank under the influence of the scholastic habit of thought. When the clergy, which then occupied the foremost position among the various classes, turned away from surgery, the latter was stamped as an office not compatible with education and standing.

The universities likewise paid tribute to this feeling, and neglected surgery almost completely in their curriculums, and thus students of medicine were deprived of opportunity to acquire knowledge in this branch; only a few, who were attracted to surgery by taste or natural gift, surmounted these difficulties. To these were added those masters of the healing art to whom the doors of the medical guild were closed on religious or social grounds, and a large number of empirics who in most instances were devoid of scientific training.

From these rather heterogeneous elements, a special surgical class or caste gradually developed, and this we find in the form of an organized corporation as early as the thirteenth century, standing distinct from the guild of physicians.

The society of Parisian surgeons called itself the Collège de St. Côme, and in its internal arrangements resembled the local medical society. It was designed to proteet all class interests and to conduct the instruction in surgery. Its pupils, after completing their studies, were constrained to undergo examination by the masters of the surgical guild, and in the event of success they received from the body-surgeon of the king permission to practice.

In order to raise the level of their general and professional knowledge, these pupils were obliged to attend certain lectures at the university, and by the medical faculty, and to acquire the degree of *Magister Artium*. In the year 1416 the Collège de St. Côme was formed into a medical faculty, by the side of the medical faculty of the university, and in 1545 received the right of conferring academic degrees.

Thus the surgeons seemed to be placed on common ground with the physicians; but the latter protested and sought to maintain the belief that surgery was an art of lower standing than internal medicine. The medical faculty of Paris stringently forbade its members to treat surgical ailments, and even excluded them from the guild if they violated this ordinance. It was supposed with Servin, who wrote in the year 1607, that people whose whole wisdom lay in the dexterity of the hand could not be qualified to pass on things medical. When at an examination of surgeons which occurred about that time a question was asked about the mechanism of respiration, the medical faculty declared that this surpassed the comprehension of "wound doctors."

Naturally enough, the fact that the boundary between surgeons and barbers was vague and often altogether absent, contributed frequently to deprive the former of the esteem to which they laid claim. Indeed, in Paris the official society of surgeons formed some sort of a union with the barbers, though it only lasted a half-year. This occurred also in other countries, and the surgeons were almost universally regarded as the brother practitioners of barbers and bathers.

These two occupations had given rise to certain societies as early as the fourteenth century, and they remained separated so long as special rights and functions were referred to each.

The barbers, whose sphere was originally limited to the shaving of the beard and the cutting of hair, had gradually obtained permission to practice the so-called minor or lower surgery. The bathers also possessed the right to perform certain small surgical operations, but only in their own bathing-apartments, whereas the barbers were permitted to visit the sick in their dwellings. The barbers might treat fresh wounds alone; the bathers, only ancient wounds and ulcers.

Bleeding was performed by the barbers; leeches and cups were applied by the bathers. The barbers had a sign for their shops, hanging up a number of tin basins before the door, or exhibiting a vessel filled with blood. For this purpose the bathers were permitted to employ only a handkerchief, or at the most a single basin.

The barbers plumed themselves on standing higher than the bathers, and protested against uniting themselves with the latter in a guild. In this controversy the Berlin barbers appealed to the fact that saddlers and strappers, cobblers and slipper-makers, though dealing with the same material, were united in separate fraternities; and in Augsburg they were forced in 1638 to dissolve the society of bathers and barbers, chiefly "on account of the arrogant pride of both, with which the greater number of barbers were so filled as to overflow."

At times these arrogant assumptions were fostered by other elements of contemporary society. Thus, in Prussia the barbers were permitted to bear the title of surgeon, whereas the bathers might dub themselves only "wound-doctors," but not surgeons. The Berlin Bathers' Fraternity would not suffer this alleged degradation, and called upon all the bathers of the land to join in a strike, in order to force the privilege of calling themselves surgeons. They even threatened refusal to pay taxes, and on that account were roughly handled by the government.

In Vienna the bathers and barbers were accorded the same rank in the year 1662, but were not united into a guild until 1770, when the title of surgeon was conferred on both.

It is obvious that the repute of the surgical profession was materially prejudiced by this union or merging with the bather or barber trade. Even when the surgeon fought his way to the position of wonderful operator, he was never forgiven the fact that his path had led through the barber-shop. He was counted among the unlearned or half-educated, and was relegated in social and municipal life to a lower plane than the physicians. In France the body-surgeon of the king was ranked in the court calendar among the chamber-servants, and in the army the younger physicians possessed a higher rank than veteran surgeons.

The surgeons enjoyed greater consideration in Italy than in Germany or France, because there many scientific and educated physicians participated in surgical practice, as also in the Netherlands and in England. The surgical guilds of Holland played a distinguished rôle in the history of their country. They were numbered among the most honored representatives of the municipality or civilian body, which had there early obtained the ascendancy, and many a Burgomaster and Town Councillor was chosen from their ranks. Their memory was perpetuated by the pictures of the Netherland painters, and even by the master hand of Rembrandt.

The Dutch surgeons exhibited a most lively interest in the improvement of medical instructions; they erected anatomical schools, established proper courses of instruction in anatomy and surgery, and constrained the universities to bestow more esteem and attention upon these branches. At the close of the seventeenth and beginning of the eighteenth century (hence at a time when the students had no opportunity at any German high school to learn practical surgery), expert operators and accoucheurs were produced in the Netherlands. To this fact we may in no small measure ascribe the high and representative position which Dutch medicine then assumed.

The Chirurgical or Surgeons' Guild in London, which was formed in 1461 from the Fraternity of Surgeons and Barbers, was expected to see to it "that the good and due order, exercise and knowledge of the science or faculty of surgery should be more perfect,"—as we read in the Act passed by Parliament in the year 1540. In 1745 the barbers were excluded from the guild, and thereafter it consisted only of surgeons. It numbered among its members men whose names were known throughout Europe, and is to this day one of the most influential medical corporations of England.

The social elevation of the surgical profession in France and Germany began in the eighteenth century, and was a consequence of the scientific impetus imparted to the surgery of that period, being also promoted by the

establishment of surgical schools and academies.

The Ecole de Chirurgie in Paris was founded in 1731, and was connected with an academy which united the most celebrated surgeons of France and other countries, and which, through the award of prizes for scientific investigations, which were published, paved the way to the solution of current scientific questions in the domain of surgery. Following this example, Joseph II. of Austria established the institution named in his honor the Josefinum, which was likewise organized simultaneously as a place of instruction and as an academy. Placed on an equality of rank with the medical faculties, equipped with instructors and resources in no wise inferior to those of the universities, and authorized to confer the degree of Doctor of Surgery, it devolved upon this institute to bring about the fellowship of physicians and surgeons. For the same purpose the Emperor further ordained that the universities should exact a uniform period of instruction from students of medicine and surgery, and should formulate for both classes of pupils a common chart of studies, which should be modified only to the extent of paying more attention in the one case to physiology, pathology and internal medicine, and in the other to anatomy and surgery.

Thus the education and social standing of physicians and surgeons became almost identical; the two professions were placed on the same social level, and fraternal intercourse was rendered possible between them. Austria was the first country in which was attained this much-desired goal.

The guilds of physicians and surgeons in the course of time entered into a condition of intellectual inertia. Anxiously concerned for the protection of the rights and traditions handed down to them by their ancestors, they yielded to the mistaken conservatism which rejects every innovation and renders progress impossible. Their time and energy were spent in idle external ceremonies, flattering to personal vanity—content if they thus preserved the appearance of a superiority whose substance had long since vanished. Petty jealousy, fear of competition, religious intolerance, and other base motives of the same species, suppressed all noble impulse and contrived to prevent the access of freedom and light.

By the conversion of the universities into State institutions, by alterations in the courses of medical instruction, and especially by the erection of clinical schools, the medical guilds lost their influence over medical education wholly or in great measure. Thus their power in the State, previously possessed and especially asserted with reference to their medical posterity, was materially abridged; at the same time they were deprived of a great fund of stimulus, before obtained from their contact with the studying youth.

Like the guilds of the merchants and the bodies of the artisans, the medical societies at the beginning of our century had outlived their usefulness. The genius of the age, struggling for the freedom and independence of the individual, demanded other forms for the future associations of fellow-practitioners. It condemned the might of caste, and created free associations of those who, animated by one purpose, sought their highest reward in the common culture of the art or science which they served.

As early as the seventeenth and eighteenth centuries, medical societies were formed in various places for the fulfillment of this purpose. They imitated the example of the learned academies like the Academia del Lincei and del Cimento in Italy, the Royal Society in London, and the Académie des Sciences in Paris, which, apart from their other scientific activities, offered a domicile to medical investigation. By reciprocal instruction and emulation, by discourses, the award of prizes and the publication of original labors, they sought with all their might to promote the enrichment of medical science.

In Paris the Société Royale de Médecine was founded in 1776, and took rank as an equal by the side of the Académie Royale de Chirurgie. Both these institutes, together with the high schools and all the other learned societies, were abrogated by the Convention in the year 1793. But only a few years later a new society was formed from their former members, and was termed at first Société de Santé, and soon afterwards Société de Médecine. This was the origin of the Académie de Médecine which was created

in 1820, the teaching corps of the medical faculty taking a prominent part in its work, and which ever after was regarded as the court of last resort for all questions of public sanitation and epidemiology in France.

In London the Medical Society, founded in 1773, conquered for itself a high position by the side of the two great medical corporations—the Royal College of Physicians and the Royal College of Surgeons. The latter understood how to accomplish the transformation from guild to Association so skillfully that they were spared the fierce storms which in other places agitated or destroyed the medical corporations. They have known how to survive the centuries, and even to preserve their influence upon the system of medical instruction; for they still conduct medical examinations and accord authority for medical practice.

Similar associations are to be found in a number of other large cities in the British Empire, and, like the universities, possess the right of presenting medical diplomas. Of all the medical societies of England, the widest sphere is that of the British Medical Association, which was formed from small beginnings in the year 1832, and is composed of numerous branch societies embracing the entire country. Each year it holds a general convention in a different city, continuing for a week, and discussing scientific questions and professional interests. Following this example, general medical unions have been formed in North America, France, Germany, and Austria, and to these larger associations belong most of the medical societies in the respective countries.

In Germany the spirit of medical fraternity was early awakened. In the year 1652 a number of Schweinfurt physicians joined themselves into a society, from which was later evolved Emperor Leopold's Academy of Natural Scientists and Physicians, whose present seat is at Halle. Medical societies were formed as early as the last century in Hamburg, Donau, Eschingen, Nuremberg, Leipsic, Frankfort-on-the-Main, and Giessen. At the present time every large or medium-sized city in Germany possesses its one or more medical societies. The great majority of them, especially in so far as they promote class interests or bear a local character, have united themselves to the German League of Physicians which was founded in the year 1873 after the establishment of the German Empire.

Amongst us in Austria, the medical guilds remained in existence longer than in Germany. They received into membership all physicians who were graduates of universities, and thus they satisfied such need of fraternal intercourse and mutual protection as might prevail amongst them.

When in the year 1873 their last privileges and their influence over medical instruction, exerted up to that time, were withdrawn and their connection with the medical faculties dissolved, they transformed themselves into medical societies, and found a sufficient sphere of activity in the apportionment of stipends whose management was entrusted to them, in representing their professional brethren, and in general scientific work. The Colleges of Medical Doctors which have thus arisen at Vienna and Prague have obtained for themselves a distinguished position among the medical corporations of the Empire by the zeal with which they have served science and humanity.

The Imperio-Royal Society of Physicians in Vienna, formed in 1838, adopted as its mission, in addition to encouraging and cultivating friendly relations among its members, the promotion of the progress of medical science. For this purpose it instituted regular gatherings, in which lectures and practical demonstrations were held and current problems discussed, also printing a periodical in which valuable labors were published. What it has accomplished in this respect, what service it has rendered to the healing art in general and to public sanitation in particular, has been eloquently set forth in the address published on the fiftieth jubilee of our Society.

In addition to these two great medical associations, a number of medical societies have arisen in Vienna during the last decade, some of which cultivate single specialties in medicine—for example, the Gynæcological Society, the Dermatological Society, the Society of Psychiatry, the Physiological Club; while others seek to bind fellow-practitioners closer together, such as the Society of Military Physicians.

In other cities of the Austrian Empire a lively and fruitful social life has developed among physicians, participated in in all the crown lands of our monarchy. The unions and societies of physicians in Lower and Upper Austria bear witness to this. The larger number have united with the general Austrian League of Physicians, which was established in 1878 for the purpose of protecting more effectively the interests of the profession.

The Austrian Government has coöperated in this mission, establishing medical councils after the pattern of those in Germany, and endowing them with a certain authority over the sanitary functions of municipalities.

The parliamentary features of our age manifest themselves likewise in the conduct of our medical fraternities. The assemblages of physicians, with their proceedings and debates, when united to the professorial chairs of the academic teachers, the sick-room, and the scientific laboratories whose investigations and results are conveyed to us through the channel of a highly developed journalism, constitute the soil on which contemporary medical history is developed.

CLINICAL LECTURES AND REPORTS.

PUERPERAL SEPSIS—INTESTINAL OBSTRUCTION—CŒLIOTOMY—COMMENTS.*

BY EDWARD W. JENKS, M.D, LL.D.

I present a patient in a condition demanding immediate abdominal section as the last and only hope of prolonging life. The history briefly related is:

Mrs. ——, æt. 32, the mother of two children; brought to the hospital after an abortion, probably in the fourth month of pregnancy, but whether abortion was accidental or induced I cannot say. When she came, there were many evidences of septicæmia, among which was an offensive discharge from the uterus—for which uterine curettement was promptly made, but the good results hoped for did not follow, as the disease germs had already traveled beyond the endometrium and produced general infection. When I first saw her a few hours since, temperature was 104° F., pulse 130, abdomen distended and painful. Vaginal examination revealed evidences of pelvic inflammation with fluid bulging out the vaginal vault.

It was then decided the only hope of saving life was a cœliotomy with evacuation of the accumulated sero-purulent fluid. A saline cathartic and an enema were administered preparatory to operation; but word was received an hour since that the bowels were obstructed, that fæcal vomiting had supervened, and that the patient was rapidly growing worse. The prognosis is necessarily unfavorable, as the patient's system is apparently overwhelmed with the poison incident to puerperal sepsis, yet it is possible life may be prolonged by the operation. The fact that medical treatment has reached its limit and expectant treatment means merely death, warrants surgical procedure. All antiseptic precautions have been taken, and as the woman is anæsthetized I proceed.

It will be observed as I make incision into the distended abdomen that a large quantity of fœtid pus and serum pours forth. I proceed to break up the many adhesions of the intestines and pelvic viscera, and find pocket after pocket containing the same offensive, dirty-looking fluid; the intestines are also distended with gas from obstruction. Note also the deep, almost purple hue they present; here is an opportunity, happily not frequent, to see in the living subject the general appearance of the abdominal organs during the late stage of acute peritonitis. Having detached all the adhesions, thoroughly irrigated and removed from the cavities all sero-purulent fluid and products of inflammation, I close the abdominal incision speedily and have the patient put in bed with bottles of hot water surrounding her extremities; if required, stimulants will be administered hypodermatically.

***

Fifteen hours have elapsed since the operation was concluded, and I am pleased to say the patient is quite comfortable, free from pain, and the bowels have moved spontaneously several times. My prognosis, however, is

*Gynæcological Clinic, Michigan College of Medicine and Surgery. Stenographically reported for the MEDICAL AGE.

not favorable, yet it is a satisfaction to feel that if death supervenes it will be without pain, and that we have made the best fight in our power. The resources of our art are sometimes futile, and in this instance I cannot but express a firm belief that this is one of the many illustrations of missed opportunities, for with the splendid physique possessed by the patient, I believe if abdominal section could have been made sufficiently early I would not now be compelled to predict a probable fatal result.

The prevention of puerperal diseases is as important to study and understand as their treatment. The veins and lymphatics are the routes through which puerperal septicæmia traverses the system, as has been determined by post-mortem study of its pathology. Different disease-germs act differently in the system; thus the gonococci are limited to certain localities and tissues, while the germs which are productive of puerperal sepsis are, through the media of the veins and lymphatics, liable to infect any part of the economy. The blood of the puerperal woman, by reason of the changes which occur therein, renders her peculiarly liable to sepsis, and consequently a less favorable subject for surgical operation. These are important points to bear in mind.

For a long time the only dreaded sequel of labor was designated puerperal fever, and the lesions in various parts of the body were believed to be a part of this so-called essential pyrexia. Later septicæmia was considered as an occasional cause of certain puerperal maladies, but the consensus of opinion is that the sole factor of puerperal fever is sepsis. Those who still cling to the old theory cite, as proof, that there are instances wherein the disease develops without opportunity for septic products being introduced from without; but these latter are simply instances of auto-infection, and parallel in character to the formation of abcesses in closed cavities or solid viscera; for instance, some old catarrhal disease of the uterus or tubes or a chronic salpingitis existing at the time a woman becomes pregnant, aided by mechanical causes, may be the starting points of auto-infection, it being more liable to occur by the peculiar blood state of pregnancy.

Delafield and Prudden believe injuries to some part of the parturient canal may furnish surfaces for the absorption of infectious material, causing destructive inflammatory and necrotic changes; that these lesions may be confined to the uterus, conveyed to the ovaries, tubes and peritoneum, or enter parts of the body remote from the primal infection. In some instances there may be intense inflammation of the vagina followed by sloughing, and even gangrene, of mucous surfaces and subjacent tissues. Again, there may be thrombosis of uterine sinuses; inflammation of veins; abscesses within the uterine walls; metastatic abscesses in the lungs, spleen, or kidneys; ulcerative endocarditis and other destructive changes. Sometimes, especially in suddenly fatal cases, the lesions are not pronounced, but the system seems to be overwhelmed as a consequence of the virulence and amount of infection. The opinion of the pathologists mentioned harmonizes with that of other investigators regarding the cause of puerperal septicæmia, and is substantially as follows: Micrococci are abundant in exudations, inflamed tissues, lymph vessels, veins, metastatic inflammations, and these pathological changes are due in most cases to infection through the *streptococcus pyogenes*. Another opinion is that the destructive local and dangerous constitutional conditions of puerperal septicæmia are caused by toxines produced by streptococci.

It is not my purpose to attempt to explain or describe in detail the phenomena and pathological changes of puerperal septicæmia. I, however, direct attention to some of the most common injuries of the puerperal woman which may be the starting point of sepsis, such as lacerations of the perineum and vaginal walls, and lacerations of the neck of the womb. Acute forms of endometritis or perimetritis with suppuration, are among the ordinary lesions. One of the most common causes is retention and decomposition of portions of the placenta. It is often difficult to differentiate between specific and non-specific infection, but in the majority of cases it is possible to ascertain if the patient has a prior history of pelvic inflammation, which will help to clear up doubts in diagnosis.

On a former occasion I expressed my views concerning the disease germ known as *gonococcus*, and how it may cause certain puerperal disorders; but I am now dealing with another kind of infection. In the salpingitis of non-puerperal women the sepsis travels along mucous tracts; but in puerperal perimetritis, which it resembles, the sepsis is also distributed through the lympatics and veins.

Puerperal septicæmia is rapid in its progress; for instance, an acute endometritis may be present to-day, and to-morrow there may be lesions elsewhere accompanied with suppuration, for the poison may be speedily conveyed by means of the lymphatics and veins to regions remote from the primal infection.

Now consider for a moment how a laceration of some portion of the parturient canal may be the starting point of sepsis: In the event of a raw surface the latter affords a point for absorption, and if the lochial discharge contains disease germs, sepsis in greater or lesser degree is apt to follow. A Vienna pathologist has shown that normal lochia contains few streptococci, but if fever supervenes from any cause they rapidly accumulate therein; and it is not requisite the temperature be greatly increased, since these germs rapidly multiply at and above 99° F. These same germs are also found in all pelvic and peritoneal exudations and most of the inflamed portions of the lying-in woman, whether primary or metastatic.

It has for a long time been taught that puerperal fever, or puerperal septicæmia, is communicable through direct contact of patients or through a third party, as a physician, midwife, or nurse; in other words, the disease is markedly infectious and easily conveyed. In the light of modern investigation the truth of these statements is verified, but happily at this time the preventable sources of infection are more clearly understood.

Hetero-infection, as a rule, is the cause of puerperal septicæmia; and it may originate in the surgically filthy hands or instruments of an obstetrician, or in the unsanitary condition of the woman herself owing to soiled clothing and bedding, or the foul condition of the room in which she is confined.

The treatment of puerperal septicæmia may be profitably studied from the standpoints of prevention and cure. To keep sepsis from the lying-in room is the most important function of the obstetrician, and therefore in every case of labor he should be certain his person (particularly his hands), instruments, and everything which can by any possibility come in contact with any portion of the parturient canal, are aseptic. Germicide preparations are of great service, but their use is of less importance than the absolute cleanliness that is obtained by the use of soap and water.

To prevent sepsis or putrefactive changes in the vagina and uterus, should be the aim of the physician in every case of either labor or abortion. If any portions of the secundines are retained, the uterus should be curetted or irrigated, and in some instances both are demanded. As streptococci may invade the system by way of a laceration of the uterus or vagina, these organs should be carefully inspected and thoroughly and frequently irrigated with some germicide. When labor has been rapid, the surgical repair of these lacerations may be successful; but if delayed, or when there has been much manipulation within the vagina, a primary surgical operation upon the parts is not always successful. I am in favor of restoring a torn perineum if it is done at once, for delay militates against success.

In the event of sepsis causing effusion within the abdominal cavity, or if there are evidences of pus within the cavity or in the Fallopian tubes, cœliotomy, and thorough irrigation with sterilized water, or removal of the tubes, should be performed without delay. If abdominal section is not too long postponed, and the operation is done with skill, most of the cases should recover. It should not be forgotten, however, that the percentage of recoveries from abdominal sections cannot be otherwise than less in puerperal than in non-puerperal patients.

The subject of puerperal fever has in the past burdened the minds of many of the most learned members of the medical profession, and innumerable volumes have been written upon the subject, for it is fraught with the deepest interest. Too often it has happened that the physiological process of childbirth has been converted into a pathological condition, and physicians prove impotent in efforts

to save life or stay the progress of epidemics. But happily, since the belief that sepsis is the cause of so-called puerperal fever has generally obtained, the perils of childbirth have been lessened and its mortality diminished. Do not forget that the majority of deaths from either induced or accidental abortion, are due to septicæmia, and that there are cases often requiring the most prompt and energetic treatment; therefore I desire to urge careful study of the causes and prophylaxis as essential to a clear understanding of treatment. In every case of childbirth or abortion the physician should be ever on the alert against possible sepsis.

Detroit, Mich.

Correspondence.

"WHAT SHALL WE DO FOR OUR TYPHOID FEVER PATIENTS?"

Editor of the MEDICAL AGE:

I have perused the paper with the above title contributed to the MEDICAL AGE of December 11th, by Doctor James Samson, with great pleasure. It is certainly refreshing to have such an important subject treated definitely by one who arrives at conclusions by practical study.

"Diagnose the case"—is important and amply disposed of. "*Quinine is always injurious to a typhoid patient*," and "*There is no such disease as typho-malarial fever*"—are correct in themselves. But do we not have pneumonia with bilious derangement? Likewise I have observed typhoid fever with bilious or malarial complication, not mitigating but aggravating the case. Seeing such a case early in the disease the diagnosis cannot be positive until the malarial element is eliminated, and this in my opinion can be done in the usual manner without aggravating the typhoid condition.

In the days when Doctor Samson and myself were students, the thermometer and chemical analysis of secretions and excretions were not in common use; instead we were instructed in the indications furnished by the tongue, of which we hear little in these latter days, though they nevertheless furnish a true guide for anti-malarial treatment. When these indications are present, I give quinine muriate in two-grain doses every two hours until twenty to twenty-four grains have been taken; and by the use of calomel I see that the patient enters the second week with corrected secretions and a clean tongue. Quinine given as just indicated is always followed by a period of partial relief, but I do not recommend it to be repeated or given continuously, since irritation would be the probable result. From this time on I treat the case as simply one of typhoid.

Of all the remedies that have been suggested for typhoid fever, I beg aconite shall not be excepted!—give one drop "normal liquid" every two hours from the time the temperature reaches 102° until the general tension of the nervous system begins to relax, then leave it off in gradually diminished doses.

Also except tincture camph opii. From continuous use and study I have never been able to note any disturbing effects from this medicament, and believe there is no more agreeable placebo, anodyne, antiseptic, or carminative; it counteracts spasms, pain, flatulence; acts favorably upon the functions of the skin and kidneys; lessens bronchial irritation and the tendency to spasmodic retention of urine; corrects inordinate evacuations; finally, it soothes the worried brain to quiet sleep, thus lessening the tendency to delirium later on. Give a spoonful every four hours so long as indicated.

Regarding temperature, it is a question in my mind whether it should be much interfered with if it rises no higher than 102° to 102.5° F.—104° F. for three successive evenings is about my idea of the safety limit.

I believe the effect of cold upon the surface, whether employed by bathing, sponging, or otherwise, is contrary to nature's process, and should be avoided in this disease when running its usual course; I am sure its tendency is to disturb.

I fully concur with Doctor Samson's advice in regard to diet; and if the temperature becomes alarmingly high, nitro-muriatic acid may be indicated, and it will be well also to "re-diagnose the case."

I have seen a young female patient, of nervous temperament, progress favorably to the second week, then develop a rapid rise of temperature, reaching 106° F., with restlessness and delirium, followed by coma and death. When the condition became alarming the patient was placed in a cold bath to reduce the temperature, and on account of the dullness of intellect it was thought best to pass the catheter, with the result of getting over a gallon of urine, and that too in the face of positive knowledge that she had been passing urine up to within a few hours of that time. Therefore I say, pass a catheter for sudden rise of temperature.

I recently saw a boy nine years of age with

a temperature of 105° F. Several members of the family were sick with typhoid, and he, either from fear or courage, would not complain and would not go to bed. The fever ran a continuous course, ending in recovery without treatment.

THOMAS SHAW.

Ypsilanti, Mich., December, 1893.

THE TOAD IN THERAPEUTICS.

Dr. Lauder Brunton, in his recent address to the Pharmaceutical Society, declared that *phrynin* has an action resembling digitalis, and added: "It is quite possible that some of these days we may have an enterprising firm advertising essences of toad as being of superlative virtue for the cure of dropsy."

Phrynin is an exceedingly poisonous alkaloid extracted from the cutaneous glands of several species of toads.

Muré, a Brazilian physician, first brought this alkaloid to notice; and in connection with the adoption of the drug by the *similia* fraternity the *Homœopathic World* tells a thrilling story of how a woman sought to poison her husband, who was dying too slowly with heart disease, by putting a toad in his wine, when to her astonishment the sufferer began rapidly to improve, and was soon out of danger. The *Medical Century* adds that cures of epilepsy and chorea by *phrynin* have been reported.

PROPOSED MEDICAL PRACTICE ACT IN OHIO.

In the proposed "Act to Regulate the Practice of Medicine in the State of Ohio," now before the General Assembly, it is provided that "the Governor, with the advice of the Senate, shall appoint a Board of Medical Registration and Examination, of seven members, in good standing in their profession." It is intended representation be given to all "schools" in proportion to numerical strength in the State, but that no one "school" shall have a majority of the whole Board. Quarterly meetings of the Board are to be required, when graduates must present diplomas for identification and registration—fee, $5; candidates not holding diplomas, to be examined—fee, $25. Board to have power to revoke certificates for cause.

CHANGE OF EDITORS.

Doctor Robert G. Eccles, of Brooklyn, N.Y., succeeds Doctor John R. Nichols as editor of the *Popular Science News*.

The Medical Age.

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Editorial.

GENITAL REFLEXES.

The ability to differentiate between the false and the true, the counterfeit and the real, comes only with careful observation and accumulated experience. True in all departments of medicine, this is particularly so in affections of the female pelvic organs, where, often, the obscurity of the symptoms, referable to parts wholly hidden from the eye and detectable only through interposed walls of firm tissue, makes the distinguishing of the simulated from the real often a matter of the greatest difficulty.

When we understand that actual disease, nervous affections, and reflected phenomena may involve the same organ, and appear with the same or a similar train of manifestations, there is little cause for wonder that the inexperienced is often a chaser of phantoms, or that even the expert is occasionally led astray.

Goodell long ago pointed out that certain affections of the rectum which apparently involved some pathological change, really consisted in nervous or hysterical explosions in that part; and recently in an admirable paper, which is well worthy the perusal and study of the most erudite, he has shown that many conditions, the symptoms of which are referable to the pelvic organs, have their real seat in the higher nerve centers, and result from brain exhaustion or perverted nerve action.

If it is demonstrable, as it is, that the "sore brain" or "sore nerves"—to adopt Goodell's terms—are capable of producing reflex phenomena which simulate uterine or ovarian disorders, it is equally capable of proof that real disease in these organs may give rise to symptoms in remote portions of the body, the significance of which is little understood by the patient and too often overlooked or slurred by the physician.

It thus not infrequently happens that the patient coming to the physician with an array of symptoms pointing, say, to the throat, is treated for a length of time for the supposed laryngeal affection, without benefit, passes from one medical man to another, and finally, becoming discouraged as to ultimate cure, abandons treatment, and resigns herself to a life of annoyance if not actual suffering.

A careful examination of the case by the physician, in the first instance, might have quickly cleared up the obscurity of the conditions presented, and the inauguration of proper treatment based upon scientific reasoning have led to ultimate relief if not cure.

The great trouble with the majority of physicians is that they enter upon the treatment of a case with too little thought as to its real importance, and give too little consideration to the conditions which may be the cause of suffering. It cannot be denied, however, that this neglect means culpability, for which there is absolutely no excuse.

Joseph Price has well said:

That general practitioner or surgeon who lightly takes a case into his hands for treatment, no matter what its nature or character, who does not realize that it appeals to the best genius of his science and art, who does not feel the motor force of solicitude as to issue, is unworthy of a place in our profession.

What in law is termed circumstantial evidence is too often taken in medicine for proof positive, but it is well known that circumstantial evidence is frequently only a combination of details which in reality may have little or nothing to do with the case. And although an individual may suffer condemnation without other proofs of guilt being adduced, he may at the same time suffer unjustly because the real culprit remains undiscovered. The insults which many organs of the body are made to tolerate vicariously for the uterus and its appendages, would form a long list in the note-books of every practitioner. We are no advocate of uterine tinkering, but ready to grant with the most pessimistic that there are altogether too many charges laid at the door of the reproductive organs; that there is too great a tendency toward local treatment, and resort to the knife for conditions which were better left alone; but we do maintain that it is as important to recognize the presence of local affections as to determine a nerve reflex or a brain exhaustion. What is needed is an all-round knowledge of the patients under care, and not until all the evidence has been sifted is the physician in position to undertake the matter of treatment in an intelligent, scientific, and proper manner.

Cases in point: A married lady, the mother of several children, is annoyed by an affection of the throat for which she fails to obtain relief. There are no symptoms pointing to the pelvic organs, but local examination reveals an enlarged uterus, the cavity of which measures four inches. Areolar hyperplasia and chronic metritis are present. Relief of the throat symptoms follows uterine applications.

A young unmarried lady suffers from a hacking cough due to paresis of the right vocal cord, which is unrelieved by general remedies and topical applications. An endometrial catarrh is found to be responsible for the obstinacy of the symptoms. Another patient has recurrent crops of styes, while a third suffers from periodical attacks of tonsillitis due to uterine catarrh.

A married patient, the mother of one child and the victim of several abortions, suffers for a period of seven years from sick-headaches which generally commence at about the time of the menstrual period, and prostrate her for nearly two weeks out of every month. General remedies result in harm rather than good. The repair of a lacerated cervix causes an immediate cessation of the disagreeable symptoms.

In another instance, the mother of several children is afflicted with neurasthenia and great mental depression, so that fears of impending insanity are entertained by her family. A surgical operation on the cervix results in a complete cure.

The histories of such cases might be multiplied, but those given will serve to illustrate our meaning.

It is not by the "snap" method that the differentiation of obscure symptoms referable to any part of the body is to be accomplished. The wise physician, by a process of inductive reasoning, will arrive at conclu-

sions which to the careless and unobserving appear incomprehensible, and by thorough physical examination confirms or corrects these deductions. But not until the true conditions present are thus determined, can a rational and scientific treatment be inaugurated; and he who strives to enter the sheepfold of success by any other door is both a thief and a robber and doomed to disappointment.

THE MAYBRICK CASE, AND POISONOUS GLYCERIN.

The Maybrick case continues to excite the attention of the public press in Great Britain, and elicits many comments *pro* and *con*. Recently, however, information has come to light, if we may accept the dictum of *Food and Sanitation*, that has direct bearing upon the sentence of Mrs. Maybrick. It will be remembered by those who followed the trial that Doctor Stevenson's evidence was the direct cause of the conviction of the unfortunate woman. This gentleman, in good faith, declared to the Court that one-tenth of a grain of arsenic found post-mortem would account for Mr. Maybrick's decease, and this evidence carried great weight with the jury in spite of the rebutting evidence given by Doctor Tidy and Mr. Rawdon MacNamara.

Now Mr. T. Fairly, public analyst of Leeds, England, reports that of eight samples of commercial glycerin analyzed by him during the quarter ending December, 1893, five were found to contain *appreciable quantities of arsenic*. This report moreover supports the facts to which public attention was directed at the time of the trial, and especially by *Food and Sanitation*, that commercial glycerin on sale at the time of James Maybrick's death contained more arsenic than was found in the Maybrick post-mortem. *Food and Sanitation* further remarks:

In the light of recent discoveries that ordinary commercial glycerin—although this was utterly unsuspected by any one connected with the case—contained actually more arsenic than was shown to be present in the post-mortem, and of the fact that the patient was given ignorantly Valentine's meat-juice, an almost worthless article in a nutrient sense, as the highest form of nourishment, and was declared first of all by his medical attendant to have died of exhaustion—which, judging by the trash he got, was, no doubt, the exact truth,—there is every circumstance pointing to the fact that James Maybrick did not die of arsenical poisoning, and that his widow is suffering innocently a terrible punishment.

The whole case is so terrible and so unsatisfactory in its medical, chemical, and legal aspects that it seems as if the interests of justice demand it should be reopened and subjected to most complete and searching reinvestigation.

ABSURD.

The height of absurdity has apparently been reached in micro-biology. For some months the medical press from the highest to the lowest, and of all classes and varieties, has teemed with "little songs" emphasizing the danger of microbes on bank notes, on coins, on postal cards, in the dextrin employed to seal envelopes and to gum the backs of postage stamps, even on the stamps and envelopes themselves—and all to what good?

Is it becoming in any reputable scientific journal to burden itself with repetition of such trash—trash which serves no earthly purpose, and that can only supply the place of a "bugaboo" to be employed in frightening imbeciles and children?

People must have all these things—bank notes, coins, postal cards, envelopes, postage stamps—microbes or no microbes; and there is no evidence the germs produce, *de facto*, any disease. Such is only a surmise without any definite proof, in spite of the many positive assertions that have been and are being promulgated. The microscope has not yet superseded pathology, and probably never will.

Money, postal cards, etc., cannot with each handling be subjected to high-heat sterilization, rendered immune by bichloride or by any other of the accredited methods. Consequently the constant repetition of such "scares" is puerile, and if the publicity given is with a view to securing personal popularity, the aspect thereof is truly asinine.

DO ANIMALS COMMIT SUICIDE?

At a recent meeting of the New York Society of Medical Jurisprudence this question was brought up by Doctor Robert S. Newton.

It has been claimed that animals do not commit *felo de se*, and Doctor Newton upheld this idea, although he admitted there was an animal "which resembles in some respects both beaver and otter," and that has been observed every nineteen years to go in droves to the water's edge, and to there separate into two groups, one of which deliberately committed suicide by plunging into the water, making no attempt to swim notwithstanding ability to do so.

As a matter of fact, animals do commit suicide. The writer some years since collected the history of not less than half a dozen authentic cases. A number of other cases were published in the *Forest and Stream* newspaper during the year 1877, and this year a Yorkshire terrier belonging to a friend deliberately took its own life in the presence of authentic witnesses. A year since a Newfoundland dog brought up with the latter as deliberately ended its existence by jumping into water.

Regarding the animal to which Doctor Newton refers, it is manifest only the lemming can be intended. The story regarding the suicide of droves of these creatures—which by the way resemble neither the beaver or otter, but belong to the rodent family—is only a repetition of an old superstition which never had any foundation in fact. Olaus Magnus and Pontoppidian are responsible for this as well as many other idle tales, and the ecclesiastical character of the former author has never served to cloak a reputation for most egregious and monumental mendacity.

Only a few years since Brehm, the well known naturalist, made a trip to Norway and spent three years in the lemming country for the express purpose of studying the creature's habits, and during this period he was unable to learn from even the oldest inhabitant any authentic case of suicide, extensive migration, etc., of this creature.

Truly, it is wonderful how scientific "facts" are made.

PAROXYSMS OF PERTUSSIS.

For the relief of paroxysms of whooping-cough no better remedy can be found than Amyl Nitrite administered internally.

A convenient mode of administration is to dissolve 24 minims Amyl Nitrite in three drachms of alcohol, adding sufficient glycerin to make a full ounce. The dose is a teaspoonful for a child of ten years and upwards, repeated as often as may be necessary. If administered immediately before the paroxysm, it will prevent, or at least jugulate, the spasm.

EDITORIAL NOTES.

Bubble Pathology.—

Modern pathology appears to be a succession of bubbles, and the *New Albany Medical Herald*, commenting thereon, sarcastically remarks:

There was the coal-tar bubble—a most promising one, brilliant with all the anilin colors; and it swelled and swelled until it filled the whole medical horizon. For thousands of years physicians had cried out in agony: "If we could only find some remedy to still this raging fire of fever that is consuming our patients!" Now, in the fullness of time, the greatest remedy had been discovered—the enthusiasm spread like wildfire—even cool heads became heated—King Cureall had descended in our midst. Meantime, while the whole medical profession was chasing madly this gay bubble, a patient, plodding German was reducing the mortality of typhoid fever from 25 to 2½ per cent. by the use of cold baths, and treating 356 cases in his private practice with but one death. Then skeptics arose who questioned the divinity of King Cureall. One, bolder than the others, said: "What is this fever that you seem so anxious to reduce? What do you expect to accomplish by reducing it?" And slowly the huge bubble gravitated earthward.

Even as we write, another bubble, composed of animal extracts, rises above the horizon. *Sunt fuerunt, vel fuere.*

Treatment of Pneumonia.—

A recent report of the Massachusetts General Hospital gives the statistics of the treatment of pneumonia in this institution during the past seventy-five years; the results are given of venesection, administration of antimony, calomel, and stimulants, and resort to expectant, antipyretic, and antiseptic methods; and yet the death-rate has been almost even all through.

The inference to be drawn is, that treatment thus far has proved of little value, or possibly that it has often been injurious. As

a matter of fact, as physicians become more experienced they rely less and less upon drugs, and more upon hygiene, dietetics, exercise, and freedom from disturbing influence in the management of this disease. Like other maladies, pneumonia is best managed by giving due heed to the individual case, including its local surroundings.

Hygiene of the Barber Shop.—

Doctor A. Blaschko enumerates the diseases which may be contracted in the barber's chair, either directly from the operator or indirectly from implements and appliances. His list includes herpes tonsurans, impetigo contagiosa, acne varioliformis, trichorrhexis nodosa, impetiginous eczema, acute eczema, alopecia areata, syphilis, tuberculosis, and typhoid fever—which has sometimes been contracted during the process of shampooing by leaning over a basin with an improperly trapped waste-pipe.

The implements of the barber's craft which, in Dr. Blaschko's opinion, may carry infection, are napkins and towels, the razor, the shaving-brush—which may itself in its own proper hairs suffer from trichorrhexis nodosa,—sponges, powder puffs, combs, and brushes.

The International Medical Congress.—

Will meet in Rome, March 29th to April 5th, 1894. We have received communications from Dr. Jacobi, chairman of the American International Committee, from which we extract as follows:

Papers to be read should be announced on or before Jan. 31st, 1894, and the title be accompanied with a brief abstract of contents and conclusions.

The reductions granted by the railway companies will be available from March 1st to April 30th, 1894, and it will be in the interest of all to obtain credentials from Dr. Jacobi, and also passports, before sailing for Europe.

"Traveling documents" will be sent to subscribers on or before Feb. 15th, 1894; after that date "congressists" will have to apply to Dr. Jacobi. Members' dues are $5; guests' dues, $2.

Evidence of Medical Progress.—

That the science of medicine must be rapidly tending toward perfection, is evidenced by an item which appears in one of the medical journals to the effect that:—

A regular physician who has gained a national reputation in the cure of cancer, both external and internal, and whose treatment has stood the test of twenty-five years' experience, will instruct one doctor in each State in his method of treatment. First-class reference to permanent cure that will bear the fullest investigation. This is the best paying specialty in the world. A skillful, reliable physician wanted with from one to two thousand dollars to take care of branch offices in ——, etc., etc.

Verbum sat sapienti.

Influence of Alcoholism in Teratology.—

By exposing hen's eggs to the vapors of alcohol for periods ranging from twenty-six to forty-eight hours, M. Ch. Féré has ascertained that their development is much retarded and often results in the production of monstrosities. In some instances alcoholized eggs of nearly a hundred hours were hardly as far developed as normal eggs of twenty hours. These facts may be regarded as having a bearing on the frequency of sterility and premature abortions in human beings afflicted with alcoholism. They show, further, that alcohol may have an effect on the embryo, even when the progenitors have not been subject to chronic alcoholism.—*Popular Science Monthly.*

Use of Opium.—

Perhaps the most important evidence secured by the British Parliamentary Commission appointed for the purpose of investigating the opium question, is that tendered by the Oriental Life Assurance Company, which possesses a monopoly of the native business of India. According to the testimony of the directors, no extra premium is charged to users of the drug, and this estimate of the risk seems to be confirmed by the surprising fact that during twenty years not a single claim has been paid for death which could be attributed to the use of opium.

The American Medical Association.—

Is to meet at San Francisco, on June 5th, 1894, for the first time since 1871, which was its first advent on the Pacific Coast. This date will occur during the Midwinter Fair, the success of which is now assured, and that

doubtless will attract a large influx from the East. Physicians will have all the concessions granted to those coming to the Fair, and it is barely possible the Committee on Arrangements may be able to secure even more favorable terms.

Other Things Besides Microbes.—

"Let us proclaim loudly enough to be understood, that there are some things in the world besides microbes. It is a very flood of animalculæ that has been let loose upon the world. Let us stop; for mercy's sake, let us stop."—Charcot.

Items and News.

Palatable Medicines.—

The average physician does not exercise sufficient care in combining his remedies with a suitable vehicle, so that they may present an elegant appearance and palatable taste. This is especially necessary in the case of children, and many physicians have built up a large and remunerative practice by exercising due care in this respect.

The manufacturing chemist thoroughly understands this advantage, and all the preparations which issue from his laboratory are pleasant alike to the eye and taste, as well as therapeutically active.

As the relief of disease is dependent upon the regularity and perseverance with which the indicated remedy is taken, and a nauseous dose is apt to be forgotten or overlooked, this question is certainly worthy of consideration.—*Medical News.*

Army Examinations.—

Of twenty-four condidates who entered the class for examination at the recent meeting of the Board in Washington, only five were successful. This result indicates that the education of medical men is very far from being up to the army standard; but we are not informed whether the applicants failed on the medical examination or upon a test of general education. From our acquaintance with army medical men, we were never impressed with their great superiority, either in knowledge or ability, over other members of the profession. There is no place, however, where lack of skill is more deplorable than in the army, and we most heartily commend this evidence of improvement.—*Kansas Medical Journal.*

Deaths Under Chloroform.—

The stream of deaths from chloroform during inhalation still flows on in undiminished volume, and while much is said and written about the methods of restoring collapsed patients, there is little about how to prevent collapse. It has not yet come home to physicians generally, that the want of oxygen is the direct cause of the collapse; but we notice a practical suggestion of Dr. G. H. Nicholson, of Liverpool, which may lead to some good. He advises a combination of oxygen with the chloroform-vapor, and says that this keeps up the blood-pressure and maintains respiration in a way that gives confidence to the operator. This is well worth trying.—*Chemist and Druggist.*

Paraldehyd Habit.—

At a recent meeting of the Louisville Medico-Chirurgical Society, a Kentucky physician described a patient who, formerly addicted to the use of morphine, was given paraldehyd as a sedative and soon got into the habit of taking the drug in large quantities, finally consuming six ounces of elixir of paraldehyd daily, which kept her quiet and helped to sleep. No effect seemed to be produced upon the heart. The drug was stopped when the habit was discovered, and the patient on laying it aside went through an experience like that of delirium tremens. Since paraldehyd is a first cousin to chloral, it is not surprising that its use should set up a habit.

Uterine Cancer.—

The prognosis of uterine cancer should be much more favorable than that of corresponding disease in other parts of the body. The uterus is practically a polypoid, while the breast, for instance, is to all intents and purposes a sessile tumor. It seems reasonable that a growth in such a body as the uterus (which has limited and sharply defined attachments to other parts) should have the disease confined within the limits of its own walls than would an organ like the breast, that is in intimate and close relationship at all points with the surrounding tissues.—*Medical Brief.*

Worthy of Remembrance.—

For bold, broad statements among the early medical writers of this century, one finds great benefit from Latham. As an example we quote the following which appears in advice about *Taking a Case:* "If locomotion be hindered, we look well to the brain and spinal marrow; if there be the livid lip and

dusky skin, we scrutinize particularly the condition of the heart and lungs; if the whole body or some of its parts be attenuated, we examine well the organs of nutrition."—*American Practitioner.*

Opportunity for Reform.—

A lunatic shot the Mayor of Chicago. There is nothing surprising in this or in any act of lunacy. The surprising thing is that when medical men advocate the commitment of lunatics to an asylum before the crimes are committed, the newspaper editors raise the cry of infringement of personal liberty. Even now there is pending a law to prevent the incarceration of the insane on the testimony of medical men. The hope of civilization lies in the education of the average newspaper editor.—*Ohio Medical Journal.*

Rhinoceros Urine in Hindu Medicine.—

Rhinoceros urine is a much approved remedy among Hindu physicians for chronic fevers and splenic enlargements, and the Calcutta Zoölogical Garden derives so considerable a revenue each year from the sale of the water passed by its rhinoceroses that men are detailed to collect the urine as it is passed. It is a very pale urine with a specific gravity of 1.000, slightly alkaline reaction, abundant phosphates and free ammonia. —*Boston Medical and Surgical Journal.*

Medical Romance.—

The *Tri-State Medical Journal* says, after fifteen years' experience as a nun, Sister Mary Regis has fled from Mercy Hospital, Davenport, Iowa, and sought refuge among friends in Rock Island, Illinois. It seems her flight was the concluding incident of a courtship dating back four years, the gentleman in the case being Doctor W. H. Ludewig, a prominent physician of Rock Island. The "Sister" has demanded to be released from her vows, when it is expected her marriage to the Doctor will speedily follow.

Exophthalmic Goitre and Milk Diet.—

Doctor Chaboux treated a patient with this disease by an exclusive milk diet, for four years. She increased in strength and weight, and the symptoms were so much improved a speedy cure was expected. This result would indicate that exophthalmic goitre is primarily due to an alteration of nutrition.—*La France Médicale.*

Hernia After Laparotomy.—

A contemporary states that one instrument-maker in New York has sold within the past year no fewer than six dozen special trusses for ventral hernia following operations for appendicitis.

If this is true, there is great need of better surgical treatment in this condition.—*Medical Record.*

Ovariotomy without Anæsthesia.—

A case was reported at the Surgical Congress, in Paris, of a double ovariotomy where was used local anæsthesia, along the line of incision of the abdominal wall, produced by application of chloride of ethyl in powder. The woman recovered without trouble.—*Pacific Medical Journal.*

Arrack in Pneumonia.—

At a recent session of the Societé de Thérapeutique de Paris an eminent speaker very highly commended spirit of rice (arrack) in the management of pneumonia, avering "rice brandy" is exceptionally free from fusel oil and other impurities.

Personals.—

The Sultan of Turkey has conferred the order of Osmania of the second class upon Doctor Chantemesse, and likewise made Doctor Sachs, health officer of Rhodes, a member of the fourth class of the same order.

Doctor Enrique Pavatto, of the Royal Navy of Spain, has been decorated with the cross of naval merit of the first class in evidence of appreciation by his sovereign of his work entitled "Elements of Naval and Military Medical Jurisprudence."

Doctor Benjamin H. Kidder, the author of "Natural History of Kerguelin Island," and well known in zoölogical circles, has been promoted from Medical Inspector to the grade of Medical Director in the United States Navy. The promotion is well earned and deserved.

The recent announcement of the death of Doctor D. Scott Moncrieff recalls the somewhat remarkable career of this well known gentleman. Born in Scotland in 1865, he received a general education at the University of Edinburgh, and at Leipsic; studied medicine in America, graduating from Harvard in 1889. Immediately thereafter he was appointed surgeon to the Anchor Line of steamers; later served as surgeon to a battalion of the Northwest Canadian Mounted Police. Subsequently he became Acting Assistant Surgeon, United States Army, at Fort Walla Walla. At the time of his unfortunate demise he was making preparations to go to Kamtchatka in order to study the people and fauna of that peninsula.

Book Reviews.

COSMOPOLITAN. Price, 15 cents; $1.50 a year. Cosmopolitan Publishing Co., New York.

The January number contains: "The Rose Lay on the Ghebir's Shrine," by John G. Whittier; "A Bit of Altruria in New York," by W. D. Howells; "Dew," a poem by Frank D. Sherman; "A Revival of the Pantomime," by T. C. Crawford; "Quaint Customs of an Island Capital," by W. W. Cady-Scotti; "Long-Distance Riding," by Captain Charles King—illustrated by Frederic Remington; "Whittier Desultoria," by Charlotte F. Bates; "Our Lady of the James," by Marion Harland; "The Wedding at Capri," by Paul Heyse; "But Also," a poem by Hunter MacCulloch; "The Young Man in Business," by Edward W. Bok; "Peckinpaw's Pills," by Frank Crane; "God's Will and Human Happiness," by St. George Mivart; "Miss Roysston's Gloves," by Richard H. Savage; "Humor: English and American," by Agnes Repplier.

The February number introduces a famous European author, viz., Valdés of Madrid; likewise the celebrated French artist, Marold, who illustrates Arthur S. Hardy's story, "A Rejected Manuscript." An article entitled "The Meloban and Pentheroy," affords a description of an imaginary naval combat; another on the designing and building of war ships appeals to the interest now being excited in a new navy for the United States; "Gliding Flight" is a contribution to the problem of aërial navigation. Elaine Goodale writes interestingly regarding "Indian Wars and Warriors;" T. C. Crawford gives the first half of "The Disappearance Syndicate." The poetry is by Sir Edwin Arnold, Graham R. Tomson, and William Young.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 a year. Charles Scribner's Sons, New York.

The February number opens with a charming study of the work of Edward Burne-Jones, by Mr. Cosmo Monkhouse. An article of unusual interest has resulted from an expedition on behalf of *Scribner's Magazine*, made by Joel Chandler Harris, in company with Daniel Smith, to the scene of "The Sea Island Hurricanes," off the coast of South Carolina. An article illustrated in a unique manner is W. A. Stiles's description of "Orchids," with an entertaining account of the adventurous journeys made in search of them in tropical countries. James Baldwin contributes an article on "The School Master"—of primitive days in the West. In this number is begun a romantic narrative, entitled "On Piratical Seas," a part of the unpublished memoirs of Peter Adolph Grotjan, who describes with remarkable vividness and literary skill his voyages to the West Indies in 1805. There is a charm about this narrative which is seldom found outside of fiction of the best kind. The fiction includes a second installment of George W. Cable's novel of "John March, Southerner;" and short stories by Mary Tappan Wright, Robert Howard Russell, and George I. Putnam (author of "In Blue Uniform"). There are poems by Mrs. Fields, Arthur Sherburne Hardy, M. L. van Vorst, and a short essay by Ferris Lockwood.

THE OVERLAND MONTHLY. Price, 25 cents; $3.00 per year.

The February number of this delightful magazine is devoted chiefly to history of the Northwest. It opens with a group of poems of places in Oregon and Washington illustrated from photographs. A most interesting story is "A Case of Heredity," by E. B. Gittings; "After the Fire" is the conclusion of a love story, which contains a vivid description of the great forest fire that swept away Port Orford. "An Episode in the Life of Robert the Simple," by H. Elton Smith, concludes the minor fiction.

"Northern Seaside Resorts" is by Frances F. Victor; "Up the Columbia in 1857," which deals especially with the picturesque, by Fred M. Stocking; "Lincoln's Federal Townsite," by Herbert Heywood; "On the Oregon Trail," by J. B. Reinhart.

A paper of great general importance, apart from any local bearing, is by John Chetwood, Jr., and entitled "Is it Practicable to Regulate Immigration?"—the subject being shrewdly and suggestively treated.

ATLANTIC MONTHLY. Price, 35 cents; $4.00 per year. Houghton, Mifflin & Co., Boston.

In the February number appears the name of Oliver Wendell Holmes with a poem upon Francis Parkman, which is a reminder of the Autocrat's unbroken connection with the magazine. Four chapters more appear of "Philip and his Wife," by Margaret Deland; H. M. Dawes contributes an article on his "Recollections of Stanton under Lincoln;" Olive Thorne Miller writes upon "A Pasture by the Great Salt Lake;" Grace McGowan Cooke contributes a fresh study of character, "For Falstaff he is Dead," and the Rev. Walter Mitchell begins an amusing two-part story of "Clerical Life."

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 per year. J. B. Lippincott Co., Philadelphia.

The February number contains a representative novel entitled "The Picture of Las Cruces," by Christian Reid; also the fourth, fifth, and sixth chapters of "The Trespasser," by Gilbert Parker. There are two good short stories, and two articles of special interest—one by Alice Wellington Pollins, entitled "The Science and the Art of Dramatic Expression," the other "Norwegian Hospitality," by Hjalmar Hjorth Boyesen.

Therapeutic Brevities.

Therapeutics of Codeine.—Professor Perininger, writing the *Therapeutische Monatshefte*, declares that Codeine is less a narcotic than generally imagined; only short periods of sleep were produced by it in his patients; when pain was present it was only slightly relieved. In cases of tuberculosis where, owing to insufficient expectoration, troublesome cough coexisted with boring pains in the chest, its action was analogous to that of morphine, producing the same relief. Similar observations were made in patients suffering from bronchitis, but the dyspeptic symptoms sometimes produced by a long use of morphine were not complained of, while some cases of dyspepsia even appeared to be improved by its use. With infants the same precautions are necessary, and in pertussis its use was followed by excellent results. In neuralgic affections of the lower extremities, injections of Codeine were not so successful as those of morphine, and the author suggests from other observations that there may be a certain antagonism between the two. He concludes that Codeine is not a substitute for morphine, though in isolated cases it appears to act better. Further experiments should be made in other directions.

Removal of Superfluous Hair.—In a paper read before the American Dermatological Society, Dr. R. B. Morrison stated that he had given up the use of electrolysis in the removal of superfluous hairs; the results are not sufficiently good to warrant continuance, and careful and proper application of a good depilatory answers the purpose much better. There are many women who wish to get rid of the white lanugo down on their faces, upon whom electricity cannot be used for fear of stimulating the growth of the surrounding hair, and the appearance of permanent scars. If a preparation of yellow sulphate of arsenic and quicklime, of equal parts, made into a paste with hot water, be allowed to dry on the hairy skin, it removes the hair, sometimes permanently. On the other hand, nothing seems to take the place of electrolysis for strong hairs growing from moles, for the removal of moles themselves, for angiomas, or for the eradication of permanent small red spots.—*Ricord.*

Fluid Extract Hydrastis as an Anti-Diaphoretic.—This agent was tried with excellent effect by Dr. Br. Olszewski in the St. Lazar Hospital at Cracow, in 93 cases of divers diseases, the intent being to reduce the sweats. The extract was administered in pulmonary inflammation, pleural exudate, intermittence, rheumatic polyarthritis, and various cardiac diseases, without producing the slightest noxious side effects. Out of 73 cases of tuberculosis, this remedy proved almost infallible in 70. The single dose of 20 to 30 drops at night sometimes proved insufficient. On the contrary, 25 to 30 drops, taken twice or thrice daily, almost always effected disappearance of the sweats after a few days. The profuse perspiration returned in some cases after completely disappearing; when it was necessary to repeat the cure. In only two cases out of 93 did the remedy cause vomiting, hence could not be borne.—*Wiener Med. Bl.*

Value of Lobelia.—Lobelia often proves a potent drug aside from its emetic properties. It is of special utility in dissipating furuncles and other abscesses. A boil frequently bathed with the fluid extract will either abort or become less painful and hasten to rapid suppuration. For felon or carbuncle, after an application of caustic potash full strength for from three to five minutes, pain may be relieved by applying a poultice composed of three parts elm flour, one part powdered Lobelia seed moistened with Lobelia fluid extract; this will promote early suppuration. One case of felon after five days and nights without sleep, received relief within twenty minutes after applying the caustic potash and poultice.—*Georgia Eclectic.*

Eczema.—Lanara recommends painting the affected surface with a mixture of:

℞ Alcoholic extract of male fern, 7½ drachms.
Alcohol, ½ ounce.
Fluid extract of myrrh, } ää 1 drachm.
Fluid extract of opium, }

Shake vigorously before using. Once a day before applying the mixture the eruption should be thoroughly cleansed with green soap and the crust removed.

—*Revue Médicale.*

Sporadic Diarrhœa.—The *Medical Free Press* declares that for sporadic diarrhœa followed by constipation and indigestion, Pichi may be classed as a specific when employed in a ten-drop dose of fluid extract three times daily. The tonic and digestive action of this drug renders it very valuable in the management of diabetes.

Where secretions are at fault, mouth parched and dry, tongue cleaving to the roof, and dryness extending to stomach and bowels, there is no drug that proves more satisfactory than Cascara sagrada.

Diet in Ulcer of the Stomach.—Doctor Roux declares that in ulcer of the stomach, foods should be chosen that are digested in the intestines, such as milk, eggs, starches, fruits, and green vegetables; farinaceous substances and eggs should constitute the chief diet. Lentils are preferable to potatoes and beans; among green vegetables salads are excellent; green peas, turnips and carrots should be mashed before eating. Light puddings are easily digested, especially if they contain eggs.—*Journal d' Hygiene.*

Action of Damiana.—Damiana is a general tonic—a true nutrient gland tonic. It is a restorative of superior power, and there can be no question of its value in the minds of those who have made use of it in wasting diseases such as consumption, scrofula, chlorosis, neurasthenia, etc. Its stimulating influence on the genital apparatus is well known; it promotes healthy nutrition, stimulates vitality, imparts energy, and overcomes those factors tending toward waste and death.—*Fort Wayne Medical Journal.*

New Emmenagogue.—After employing in forty cases of amenorrhœa, Doctor Bloom declares Oxalic Acid to be the best emmenagogue extant where the causes are other than physiological. He employs:

℞ Acid oxalic, 8 grains.
Water, }
Syrup of lemon, } ää 2 ounces.

Dose, one drachm four times daily.

This preparation appears to be especially adapted to chlorotic conditions.

Action of Cocaine on the Mammæ.—A French writer reports that in treating a case of cracked nipple with two-per-cent. solution of cocaine hydrochlorate, he found that the secretion of milk was stopped by the application; the breasts became flaccid, and the nipples lost their erectility. The functional activity of the breast was restored on discontinuing the use of cocaine.—*British Medical Journal.*

For Fermentative Dyspepsia.—

℞ Pure beechwood creasote, 12 minims.
Proof spirit, 2½ ounces.
Benzoate of ammonia, 2 drachms.
Glycerin, 6 drachms.
Infusion of cloves sufficient to make 6 ounces.

Dose, a tablespoonful in water two or three times daily between meals.

—*Asclepiad.*

Oil of Amber in Acne.—Doctor H. S. Purdon recommends the use of oil of amber in acne, rubbing into the affected part at night and washing off the next morning with hot water and soap. This oil has a pleasant odor, is much cleaner than any ointment, penetrates into the follicles, and if continued is an active rubefacient, producing more or less irritation and slight redness of the skin.—*Exchange.*

Suppository for Dysmenorrhœa.—

℞ Ext. cannabis Indica (assayed), 1 grain.
Ext. belladonnæ (assayed), 1 grain.
Cacao butter, 12 drachms.

Introduce suppository every evening, starting from the fifth day before the menses.—*Farlow.*

Tonsillitis.—Doctor Charles Cobbs, of New Athens, Ohio, writes that he has found one-half drop of croton oil, applied daily to the affected tonsil, with a probe, will permanently cure suppurative tonsillitis. He has proven it in his own case among others.—*Southern Clinic.*

Epilepsy and Neurasthenia.—S. A. Siminoff, in *Med. Obozr.*, details three cases of epilepsy permanently relieved by administration of a wineglassful of infusion of Tansy night and morning. He has also used with good effect in neurasthenia where valerian had ceased to be effective.

Chloroform as a Hæmostatic.—Applied on lint or absorbent cotton to a bleeding surface, chloroform promptly stays the flow, acts as a direct stimulant to the patient, and leaves no blood crust to fall off and reproduce hæmorrhage.—*Medical Press and Circular.*

Kava Kava.—A sedative tonic to mucous membrane, particularly valuable in specific urethritis, and especially so to induce appe-

tite in general gastric debility. In some cases it proves an active diuretic.—*Medical Summary.*

Value of Saw Palmetto.—It will increase the size of the mammæ of ordinary healthy women below fifty years of age. In two typical cases, one aged twenty-five, the other forty-two, the increase was pronounced at the end of three months.—*Medical Free Press.*

Baptisia in Typhoid.—In typhoid fever Doctor Drake reports a special success from the employment of *Baptisia tinctoria.* Ten drops are administered every twenty-four hours until convalescence is established.

Jaborandi.—This is the most active sialagogue and diaphoretic at our command. It is a specific for dry, hoarse bronchial cough in stridulous laryngitis, and pseudo-membranous croup.—*Exchange.*

Epilepsy.—The white alkaloid of Hydrastis is said to possess powerful antispasmodic properties, and recently has been recommended in the treatment of epilepsy.—*Medical World.*

Insomnia.—May often be relieved by two to five drops of Normal Liquid Hyoscyamus; this is usually true if the sleeplessness is due to nervous irritation.—*Kansas Medical Journal.*

Cramps of Pregnancy.—Sulphate of Copper administered at bed-time in five-milligramme doses affords relief from the cramps peculiar to pregnant women.—*La Gazette Médicale.*

Threatened Abortion.—Doctor Polak advises rest in bed, morphine or opium per rectum, and drachm doses of Fluid Extract Black Haw.

Diabetes Mellitus.—Has been successfully treated by the administration three times daily of one-twentieth grain of Chloride of Gold and Sodium.—*Medical World.*

Carbolic Acid Poisoning.—The best chemical antidote is Glauber's salt; sulpho-carbonate of soda is formed.—*Medical World.*

Strychnine.—Is a better heart tonic in pneumonia than digitalis.—*Mays.*

Medical Progress.

MEDICAL CYCLES.—One is apt to forget that many years ago different parts of living animals were used as medicines. To go back only to Nicolas Culpepper's edition of the "Pharmacopœia Londinensis; or, the London Dispensatory," published in 1659, we find, among other curious "notions," that "the brains of sparrows being eaten provoke lust exceedingly." This is in accord with a general opinion concerning these birds. Further, "the brain of an hare being rosted, helps trembling; it makes children breed teeth easily, their gums being rubbed with it; it also helps scald heads, and falling off of hair, the head being anointed with it." In those days it was not pleasant for some of our domestic pets, for we read that "the head of a coal black cat being burnt to ashes in a new pot, and some of the ashes blown into the eye every day, help such as have a skin growing over their sight; if there be any inflammation, moisten an oak leaf in water and lay over the eye; Mizaldus saith (by this one only medicine) he cured such as have been blind a whole year." There is also hope for the gouty, for "the head of young kite being burned to ashes, and the quantity of a drachm of it taken every morning in a little water, is an admirable remedy against the gout." But this is a case of first catch your kite, and mind, it must be young! Also, "Crab-eyes breaks the stone, and opens stopping of the bowels."

Some of the following are almost up to date:

"The lungs of a fox wel dryed (but not burned) is an admirable strengthener to the Lungs."

"The liver of a duck stops fluxes and strengthens the Liver exceedingly."

"The liver of a frog, being dryed and eaten, helps quartan agues, or, as the vulgar call them, *third-day agues.*"

"Cocks stones nourish mightily, and refresh and restore such bodies as have been wasted by long sicknesse; they are admirably good in Hectick fevers, and (Galen's supposed incurable) Marasmus, which is a consumption attending upon a hectick fever; they increase seed, and help such as are weak in the sports of Venus." This will interest Monsieur Brown-Séquard.

"A sheeps or goats bladder being burnt, and the ashes given inwardly, helps the Diabetes." Powdered dried mouse does the same, and is also good for incontinence of urine.

Culpepper does not refer to mummy, so

probably it had gone out of fashion when he wrote, or the "corner" in artificial old Pharaohs and other Nilotic worthies had been broken up by the Pasha we have just read of, and the speculative Hebrews *compelled* to cast about for some other article in demand just then. He does refer, however, to human bones. "The scul of a man that was never buried, being beaten to pouder and given inwardly, the quantity of a dram at a time in Betony Water, helps palsies and falling sicknesse." Another statement he makes runs as follows: "That small triangular bone in the skul of a man, called *os triquetrum*, so absolutely cures the falling-sicknesse, that it will never come again, saith *Paracelsus*." Methinks Paracelsus still lives. —*The Medical Magazine* (London).

THE INCUBATION PERIODS OF THE INFECTIOUS DISEASES.—The Clinical Society of London has recently published the result of extensive observations regarding the period of incubation of some of the infectious diseases. A constant period of incubation is not to be expected. In most instances, as will be seen from the following table, the difference between the maximum and the minimum period is not very great. It seems remarkable, however, that a disease should show such extremes as typhoid fever:

	Normal.	Maximum.	Minimum.
Variola	12 days.	14 days.	9 days.
Varicella	14 "	19 "	13 "
Measles.	10 "	14 "	4 "
Rubella.....	18 "	21 "	8 "
Scarlatina	2 "	7 "	1 day.
Influenza.....	3 "	5 "	1 "
Diphtheria....	2 "	7 "	2 days.
Typhoid fever.	12 "	23 "	5 "
Mumps.....	19 "	25 "	12 "

It is a peculiar fact that the diseases in which the period of incubation is shortest are those in which the infection persists the longest.

The period of quarantine must be guided largely by the period of incubation, hence the subject is an important one for a variety of reasons. Doctor Dawson Williams, commenting upon these figures in the *Medical Magazine* (London), states that the period of quarantine should be at least a day longer than the maximum period of incubation for each disease. This is a very uncertain rule, however, for the patient should be free from all signs of illness, and especially from fever. The period of infection is very doubtful. It may be greatly prolonged by complications. This is especially true of smallpox, diphtheria, typhoid and scarlet fevers. The period during which a disease may be infectious cannot be stated definitely. It varies with different diseases, and must be determined according to the symptoms and character of the case. Measles, chicken-pox, and mumps lose the direct power of infection very early, and the infective principle does not remain active for a long period in the room in which the patient has been ill. Measles, mumps, and chicken-pox may be infectious in the earlier stages before becoming definite in character.

Smallpox, fortunately, is not actually dangerous until the eruption appears. This statement, the committee affirms, has been proven by abundant observation.—*Scientific American.*

TUBERCULOSIS IN THE DOG AND CAT.—Eber has made autopsies upon 400 dogs and 100 cats to discover whether tuberculosis was present, and found it in eleven of the former (2.75 per cent.) and one of the latter. The anatomical diagnosis was in every case established by microscopical examination for the tubercle bacilli. In nine of the eleven dogs the lung was the organ chiefly affected. The disease manifested itself in eight cases in the form of chronic indurating broncho-pneumonia with central softening of the newly formed tissue. There were also complications in the form of chronic bronchitis with bronchiectatic cavities, as well as pleurisy, pericarditis, and hydropic collections. The bronchial and mediastinal lymph-glands showed only in two cases distinct tubercle formation; in the remaining cases they were hyperplastic only, or showed no changes. No changes were demonstrable in the mucous membrane of the intestines. The product of tuberculosis in dogs showed a peculiar sarcoma-like condition, in which were numerous soft masses, containing pure cultures of tubercle bacilli. In the cat chronic tuberculosis of the lungs and related lymph-glands was observed. Eber shows by this that the distribution of tuberculosis in the dog and cat is not everywhere as great as in Copenhagen and in Denmark generally.—*University Medical Magazine.*

EFFECT OF MASSAGE ON THE BLOOD CORPUSCLES.—At the College of Physicians, Philadelphia, Doctor J. K. Mitchell reported, as the result of a series of observations made before and after, that the number of red blood-corpuscles was found to be enormously increased by general massage. This was generally accompanied by a smaller increase of the hæmoglobin, and in some cases by an

even greater increase in the number of white corpuscles. To explain the phenomenon he called attention to the accumulated corpuscles seen under the microscope in the smaller vessels of the frog's foot, and suggested that the pushing out of these into the general blood-current might account for the increase of number.

In discussing the matter, Doctor S. Weir Mitchell compared it to the bringing out of the inhabitants of a city from the houses and by-ways into the larger streets, and Doctor B. A. Randall suggested that the increase might only be relative, being in part due to the withdrawal of the fluid elements of the blood into the tissues as a consequence of the massage.—*The Polyclinic.*

ÆTIOLOGY OF PERICARDITIS.—Rheumatism is the chief cause of pericarditis. Syphilis, tuberculosis, and malignant disease of the pericardium produce it in a very small percentage of cases. Chorea has been credited with producing it, but in an unscientific manner. The cause of most cases of chorea is rheumatism, and if the cases of pericarditis credited to chorea were studied we would find that the pericarditis and chorea are equally dependent on the same cause, rheumatism. The same that has been said of chorea will apply to cases supposed to be secondary to pneumonia or pleurisy. Double pneumonia or double pleurisy complicated by pericarditis, if carefully investigated, will give a rheumatic history. Granular kidney has been supposed to have a causative relation to pericarditis, but Sir William Roberts in 406 necropsies of chronic Bright's disease found pericarditis only thirty times, or only about 7 per cent.—*American Practitioner and News.*

THE REGIMEN OF DIABETICS.—Professor Ebstein refers to the danger of producing coma in diabetics by changing the diet too rapidly. Even when the diabetic symptoms are most favorably influenced by a strict regimen, he fears a total suppression of amylaceous diet will often result in coma—an accident that is indicated by the presence in the urine of acetic acid, as determined by a solution of chloride of iron. He formulates the following absolute rule: "If the urine of a diabetic patient gives an intense red coloration with a solution of perchloride of iron, that is to say, if large quantities of acetic acid are present, amylaceous food is not to be entirely suppressed, but allowed to be ingested in small quantities with circumspection."—*Journal de Médecine de Paris.*

ÆTIOLOGY OF BRONCHITIS.—Marfan and Claisse place bronchitis among the germ diseases. They claim by the sudden chilling of the cutaneous surface, and especially when the body has been overheated and is perspiring, such internal changes are set up that the microbes which commonly infest the upper air-passages and bronchi find a favorable condition for multiplication and pathological operations. Under ordinary conditions the leucocytes are able to control the invading hosts, but the congestion (plus something else as yet not understood) produced by the sudden chilling of the surface places the organism in a state of lessened resistance, and the enemy enters and possesses the country for a period varying from two to five weeks.—*Abstract from Boston Medical and Surgical Journal.*

THE CONTAGION OF MUMPS.—The duration of the period of incubation in mumps is, in the majority of cases, from 18 to 22 days, but may vary from 8 to 30 days. Mumps is contagious, especially during the period of incubation, but is transmissible after cure for a period as yet undetermined. The blood and fluid extracted from the parotid and the testicle contain a special microbe, which appears to be pathogenic, but the negative results of incubation upon animals hold this point in abeyance. The angina and swelling of the submaxillary glands constitute at times the initial manifestations of the disease.—*Le Courrier Médicale.*

PATHOLOGICAL ANATOMY OF SCLERODERMA.—Hoffa excised from the thigh the whole of a patch of scleroderma in the early stage. Histological examination confirmed what had been previously shown by Dinklers. The change found was a fibrous endarteritis, affecting the middle coat of the arteries of the skin. A small cell infiltration of the subcutaneous adipose tissue, and infiltration along the glands of the skin and the sweat glands, were also observed. The elastic fibres were not increased.—*Medical Record.*

SIGNIFICANCE OF INGUINAL PAIN.—Doctor Montgomery declares that pain in the inguinal region occurring before menstruation is evidence of diseased condition of the ovaries.

Publisher's Department.

Send 7 cts. in postage to A. Kuhlman, 203 Jefferson avenue, Detroit, Mich., and receive his illustrated Catalogue of Surgical Instruments, Aseptic Pocket Cases, Batteries, Hand and Buggy Cases, etc., etc.

Dr. O. G. Cilley, Boston, Mass., says: "I have used Horsford's Acid Phosphate very extensively, and with the most remarkable success in dyspepsia, and in all cases where there is derangement of the liver and kidneys."

A. C. Bernays, M.D., Professor of Surgery, Marion-Sims College, writes as follows to the Dios Chemical Co. of St. Louis: "I have used Sennine in a great many cases, and can recommend it conscientiously. Send one-half dozen to the City Hospital at once."

The Western Leather Manufacturing Company, of Chicago, manufacturers of physicians' medicine cases, have removed to 125–137 Rees street, thereby doubling their manufacturing space. For detailed information concerning their superb case, styled "Western Leader," please be referred to advertising page 20.

Dr. Granville L. Fox, Slate Springs, Miss., says: "I have used Papine in two cases of typhoid fever. In all my practice of four years I have never yet found any preparation or combination that acted so admirably as an anodyne. Sometimes I combine it with Bromidia and get the best of results. I expect to keep it on hand from now on, as I do not know of anything that would exactly replace it in the experience I have had with it."

Every physician, says Dr. Van Valgah, knows full well the advantages to be derived from the use of Antikamnia in very many diseases, but a number of them are still lacking a knowledge of the fact that Antikamnia in combination with various remedies has a peculiarly happy effect; particularly is this the case when combined with salol. Salol is a most valuable remedy in many affections; and its usefulness seems to be enhanced by combining it with Antikamnia. The rheumatoid conditions so often seen in various manifestations in this country, are wonderfully relieved by the use of this combination.

"With bloodless lips, the villain glared at her." His eyes, doubtless, were otherwise occupied.—*Boston Transcript.*

The Yale Chemical Company of Chicago are receiving the most flattering letters from physicians who have used their new analgesic and antipyretic—*Gurania.* Dr. J. W. Weller, of Washington, Ill., writes them: "I have used Gurania in inflammatory rheumatism complicated with heart disease, and was agreeably surprised. I also used it in a case of inflammation of the bowels to relieve pain, and was delighted with it, as it did not constipate the bowels like opium. I have as yet to note any cardiac depressant effects from its use." The Yale Chem. Co. would appreciate your addressing them for samples and descriptive literature.

He doffed his tile and looked thereat,
And to himself he said:
Yes, this certainly is my hat—
But where did I get this head?
—*Exchange.*

For many years efforts have been made to simplify the business books of physicians so that as little time as possible would be required for the medical man to enter his charges and keep something like a systematic account of his services. Many Visiting Lists have been constructed to enable physicians to more easily keep account of their labors, and one of the number worthy of especial mention is **Bernd's Physician's Register.** For a doctor to keep one of these requires no knowledge of bookkeeping, nevertheless the method involved is one of the best yet devised in connection with physicians' accounts. Messrs. Henry Bernd & Co., whose address is St. Louis, Mo., would appreciate your request for their circular containing price-list and *fac-simile* of pages, with description, opinions, and all other desired information.

TWO LIVES.

"I'm afraid," sighed the bachelor of 60, "that my life has been wasted."

"I'm sure," sighed the maiden of the same age, "that mine has been Miss spent."—*Detroit Free Press.*

With the old F. E. *Phytolacca Decandra.* I have had quite a large experience, and have used it with much success. First as an alterative. In glandular diseases, especially, I found it reliable. I have made use of it also in almost all blood and glandular troubles; in some skin diseases, locally on acute mammary inflammations, hypodermically and locally in hæmorrhoids, and as a wash in not a few cases of skin affections; so that when I received the suggestion to try "Phytoline," a new preparation made by the Walker Pharmacal Co., of your city, it was with a feeling of much confidence that I began using it in a few selected cases, for the purpose especially indicated—that of a fat-reducer—and I have obtained excellent results; it occupies a high rank as such a medica-

ment. I have also found it a great regulator of the glandular system. It seems to act by absorbing all useless and excessive fat.

Phytoline indicates for itself a prominent position in the armamentarium of the therapist.—*Geo. H. Rice, M.D., in the Medical Fortnightly.*

MET HIS MATCH.

A fellow, thinking to appear smart, entered a notion store on Sixth avenue the other day and said to one of the salesladies:

"Ever have any call for husbands here?"

"Oh, yes, occasionally. Are you looking for a market?"

"Yes," said smarty.

"All right. Step right up on the ten-cent counter."—*Texas Siftings.*

An editorial in the *St. Louis Medical Era* has the following to say in connection with the treatment of syphilis: "We find anæmia in this disease very often a troublesome feature, in which case it will be necessary to resort to iron in some form in connection with mercury. We have derived remarkable results from the exhibition of the 'six iodides' as prepared by the Walker-Green Pharmaceutical Co."—of Kansas City. This preparation contains all the medicinal ingredients desired, in a most acceptable form, with the proportions definitely given in the formula on each bottle, so that it can always be intelligently prescribed. We have here iron, potash, magnesia, mercury, soda, and arsenic, combined with iodine, and such aromatics as are calculated to render them palatable and efficient. Each one of the iodides in this preparation wields a power and performs a duty in the way of eliminating toxic material and restoring tone to the debilitated organs of a syphilitic, but that power is tenfold increased by the combination of this preparation.

Bluster: Do you mean to say that I am a liar?
Blister: I hope that I could not do so ungentlemanly a thing; but I see you catch my idea.—*Boston Transcript.*

Cyrus Edson, M.D., in the *Times and Register*, stated as follows concerning Glycozone: Glycozone is defined by its discoverer, Mr. Ch. Marchand, to be a stable compound, resulting from the chemical reaction that takes place when c. p. glycerin is submitted, under certain conditions, to the action of fifteen times its own volume of ozone, under normal atmospheric pressure at a temperature of 0° C. The necessity of using c. p. glycerin is imperative, as the presence of water or other foreign matter in the glycerin causes the production in the resulting compound of formic acid, glyceric acid, and other secondary products, that have a harmful effect upon animal tissues. Glycozone has a pleasant, sweetish taste. Being hygroscopic it must be kept in tightly corked bottles, and, as long as it is kept in this condition, it does not deteriorate at a temperature of even 110° F. In the opinion of the writer, Glycozone is the best known agent for the treatment of gastric ulcer. It is also one of the best remedies for the treatment of the stomach catarrh of chronic alcoholism, and for chronic gastric catarrh from other causes. It is excellent for atonic dyspepsia, and for acid dyspepsia.

WHAT IS A BLUSH?

It seems that, unlike an osculatory demonstration, a blush can be scientifically defined. A Cincinnati physician attempts it as follows:

"A blush is a temporary erythema and calorific effulgence of the physiognomy, ætiologized by the perceptiveness of the sensorium when in a predicament of unequilibrity from a sense of shame, anger, or other cause, eventuating in a paresis of the vaso-motor nervous filaments of the facial capillaries, whereby, being divested of their elasticity, they are suffused with radiance emanating from an intimidated præcordia."

For the Teeth — Some Excellent Rules to Follow in the Care of Them.—One of the most skillful dentists in New York gives these rules for the care of the teeth: Use a soft brush and water the temperature of the mouth. Brush the teeth up and down in the morning, before going to bed, and after eating, whether it is three or six times a day. Use a good tooth powder twice a week, not oftener, except in case of sickness, when the acids from a disordered stomach are apt to have an unwholesome effect upon the dentine. Avoid all tooth pastes and dentifrices that foam in the mouth; the lather is a sure sign of soap, and soap injures the gums without in any way cleansing the teeth. The very best powder is of precipitated chalk; it is absolutely harmless and will clean the enamel without affecting the gums. Orris root or a little wintergreen added gives a pleasant flavor, but in no way improves the chalk. At least a quart of tepid water should be used in rinsing the mouth. A teaspoonful of Listerine in half a glass of water, used as a wash and gargle after meals, is excellent; it is good for sore or loose gums; it sweetens the mouth, and is a valuable antiseptic, destroying promptly all odors emanating from diseased gums and teeth. Coarse, hard brushes and soapy dentifrices cause the gums to recede, leaving the dentine exposed. Use a quill pick if necessary after eating, but a piece of waxed foss is better. These rules are worth heeding. Be assured of the genuine Listerine by purchasing an original bottle.

"I am here gentlemen," explained the pick-pocket to his fellow-prisoners, "as the result of a moment of abstraction."

"And I," said the incendiary, "because of an unfortunate habit of making light of things."

"And I," chimed in the forger, "on account of a simple desire to make a name for myself."

"And I," added the burglar, "through nothing but taking advantage of an opening which was offered in a large mercantile establishment up town."

But here the warden separated them.—*Boston Journal of Health.*

26 October 1893.

METCALF'S COCAWEIN verdankt seine ausgedehnte Verbreitung, sowie überall geteilte Anerkennung verschiedenen Umständen, von denen die nachstehenden die bemerkenswertesten sind.

Vor allem zunächst dem zur Herstellung verwendeten Material. Verschieden von den meisten auf dem Markte befindlichen Erzeugnissen, die im grossen und ganzen sehr wenig oder gar keinen Coca enthalten, wird METCALF'S COCAWEIN von frischen Cocablättern hergestellt, ein Vorzug, der von jedem Arzte gewürdigt werden sollte, dem an der medicamentösen Wirkung seines Receptes gelegen ist.—Der zur Bereitung benutzte Wein ist ein vorzüglicher Traubenwein von ausgesuchtem Aroma, das seines Gleichen sucht.—Auf diese Weise vereinigt METCALF'S COCAWEIN nicht genug zu würdigende Vorzüge in sich. Die Thatsache, dass er die Wirkungen beider Ingredienzien in harmonischer Zusammensetzung verbindet, macht ihn zu einem Cocawein im wahren Sinne des Wortes. Er ist daher ein ausgezeichnetes Tonicum, ein sicheres Anodynum und ein willkommenes Nutriens.

METCALF'S COCAWEIN hat sich in Tausenden von Fällen als *ultimum refugium* bewährt. In Zuständen allgemeiner Erschöpfung, wie sie durch febrile Krankheiten hervorgerufen werden, hat dieser Wein Wunder gethan.

Fügen wir hinzu, dass dieser Wein von bewährten Chemikern hergestellt ist, die weder Mühe noch Geld gescheut haben, um einen Artikel von bester Qualität den Herren Aerzten im besonderen, dem Publikum im allgemeinen, zu offeriren, so dürfen wir überzeugt sein, dass „METCALF'S COCA WINE" sich täglich mehr und mehr Freunde erwerben wird.

OTTO HENGST, M.D.,
Boston, Mass.

It so happened that several days ago a certain well known lawyer, who for narrative purposes shall be nameless, came into the official presence of a learned judge, whose cognomen shall likewise be discreetly veiled.

The lawyer did not arrive alone. He was accompanied by a large number of previously encompassed drinks, and, in the language of the pave, a symphonic "brannigan" was concealed about his person.

"Mr. ——," remarked the Solon, "I am astonished to see you in such a condition."

"Dishun!" sighed the lawyer. 'Wazzer matter?"

"There is no need of explaining, sir."

"Yesher is. You 'tack my condishun—wazzer matter wish it?"

"To be plain, Mr. ——, you are very drunk."

"Y'r honor," responded the inebriate one, after a moment's pause, "I've been prac'sing here for fifteen years, un' that's the first c'rect decishun I ever heard in this court."

It cost him something for contempt.

Messrs. Parke, Davis & Co. have very lately added to their list a line of Soluble Ophthalmic Tablets, embracing those drugs most commonly employed locally in treating diseases of the eye or in preparing this organ for surgical therapeusis. Their importance, value and usefulness will be at once recognized, not only by the oculist but also by the general practitioner. The Tablets dissolve readily in water, and hence can be employed for the extemporaneous preparation of solutions.

MEDICINE-DROPPER, GRADUATED.
(Price to physicians, 30 cents each, net.)

To make these tablets more available, they have introduced the Medicine-Dropper illustrated above. The tablets may be dissolved in the necessary amount of water, and the bottle closed by means of the pipette, thus forming an air-tight container. The rubber diaphragm closing the top of the pipette, when compressed and then released, will cause the solution to ascend the tube; then, of course, by gently pressing the diaphragm, one or more drops can be easily forced out.

The father of the twin babies had been left temporarily in charge of them. At the end of half an hour he weakened. "Angeline," he called out to his wife, in a voice of agonizing protest, "you'll have to come and take one of these boys. No man can serve two masters!"—*Chicago Tribune.*

The Medical Age.

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Original Articles.

POSTERIOR DEVIATIONS OF THE UTERUS, AND THEIR TREATMENT.*

BY W. P. MANTON, M.D.

The subject of posterior deviations of the uterus is one which appeals to every practitioner, for there are few of us who have not encountered cases in which every effort at correction of the displacement has proved futile, with resulting loss of confidence on the part of the patient and chagrin and disgust to the physician. That the importance of uterine displacement in general has been greatly exaggerated, there can be no doubt; but that such deviations may produce great physical suffering, even to the extent of incapacitating the patient from her ordinary duties, cannot be denied. And, as it is the aim of the science and the art of the physician to relieve human suffering, the intractability of a few cases renders the subject one of the greatest importance in the practice of gynæcology.

In order that we may more clearly comprehend the necessity for treatment, it will be necessary to briefly sketch some of the causes which result in such displacements.

Ætiology.—That most cases of so-called congenital displacement are acquired, and not the result of malformation during intra-uterine life, is the experience of every thoughtful and observant practitioner. While the coalescence of the ducts of Müller may be defective in the evolution of the uterus, such condition must be exceedingly rare. In a large number of human embryos which I have had the opportunity of dissecting, I have never yet found a malformation of this organ. The majority of so-called congenital deviations of the uterus are undoubtedly the result of some accident occurring at about the period of puberty, and the multiplicity of conditions which may affect the developing womb at this time can hardly be enumerated. The engorged and softened tissues incident to the establishment of the menstrual function would seem to render any external or internal accident at this period of life capable of producing disturbances which at a later period, after the establishment of the menstrual function, would be impossible. Thus, falls, continued jarring of the body—as in excessive rope-jumping—and a thousand and one other factors, may give rise to a displacement of the organ. In the virgin womb, at a later period, a vast number of agencies are capable of giving rise to the same conditions. Thus, inactivity and a life of luxurious indolence may produce such condition in the muscular structure of the uterus that, even without the intervention of external or mechanical forces, versions and flexions may occur. Disorders of menstruation, long continued, may produce such changes in the tissues of the womb as also to give rise to displacements. And inflammatory states outside of the uterus itself may produce such contractions and shortenings of the uterine supports that the organ is dragged from its normal site and held firmly in a dislocated position. Schultze has pointed out that pelvi-peritonitis is capable of producing a great variety of uterine displacements. Tumors situated either in the abdominal cavity or in the walls of the uterus itself, giving rise to increased pressure or weight in that portion, may result in such displacement. That displacement may occur following abortion or normal delivery—at which time the softened uterine walls and lack of tonicity in the ligaments render the organ particularly susceptible to any change by intra-abdominal pressure or the application of external forces—is well known. The necessity of prolonged rest in bed following delivery, in order that the parts in question may regain their tone, a little study of the subject will at once render apparent.

Symptoms.—The symptoms of retro-devia-

*Read at the annual meeting of the Kalamazoo Academy of Medicine, January 16th, 1894.

tions of the uterus may be entirely wanting or exceedingly numerous. Thus, the nervous system acting upon various organs of the body may produce symptoms which, although apparently confined to such organs, have their *seat* in the malposition of the uterus. By the backward displacement of the uterus, the ovaries may be dragged downward and, lodging between that organ and the pelvic wall, may be subjected to a varying amount of pressure which, according to its intensity, may not only give rise to pain in that locality, but to various reflex phenomena in other parts of the body: thus the functions of the brain, the eyes, the stomach, and other abdominal viscera, may be more or less seriously affected and the life of the individual rendered miserable. In a paper read some years ago before the Michigan State Medical Society,* I pointed out that back-ache—which is perhaps one of the most frequent symptoms of uterine displacement, particularly of the posterior variety—may or may not be indicative of uterine disease, but taken in connection with other symptoms is often of great assistance to the physician in determining the condition for which relief is sought.

Diagnosis.—Physical examination alone will reveal the true state of the conditions present. In the determination of retro-deviations, the bi-manual method is of the utmost importance; but even the most carefully carried-out examination may, in certain instances, result negatively in so far as diagnosis is concerned. Subperitoneal fibroids growing from the posterior surface of the uterus, a displaced ovary or tube surrounded by a circumscribed mass of effused material, perhaps even a ball of fæcal matter in the intestine, or a small pedunculated ovarian growth, may so mask the real condition present as to entirely mislead the most expert. A case which recently came under my observation well illustrates this point: A lady, a resident of New York City, visiting in Detroit, applied to me for the relief of some pelvic trouble from which she had been suffering for a period of several weeks. A careful bi-manual examination revealed the presence of a small rounded tumor in the posterior *cul-de-sac* which in every way had the appearance and feel of the fundus uteri. The rest of the pelvis was filled up by a mass of effusion in which the rounded tumor was imbedded. While inclining to the idea of a retroflexed uterus bound down by plastic material, the history and symptoms of the case rendered a positive diagnosis impossible. Local treatment continued over a period of several weeks by a medical friend, during my absence from the city, resulted in the complete clearing up of the effused material, and on my return I was enabled to definitely determine that the small tumor beyond the uterus was not the displaced fundus, but some condition involving a prolapsed Fallopian tube. The patient was informed that an operation was imperative, not only for the relief of the symptoms (which, however, had largely subsided), but also as a guarantee of life and future health. She accepted the conclusion, but as she desired to be with her family before undergoing such a serious procedure, I sent her to Prof. Lusk of New York, who subsequently operated upon the case. The condition was found to be that of ectopic pregnancy in its incipient stage; the patient subsequently made a satisfactory recovery.

The not infrequent occurrence of similar conditions within the pelvis should lead the physician to observe the utmost caution in arriving at a diagnosis, and especially should he avoid stating to the patient with any positiveness the conclusions at which he has arrived, until repeated and careful examinations have convinced him that his deductions are correct. The rediscovery of the uterine sound by Simpson placed in the hands of the physician one of the most important instruments of precision in the diagnosis of uterine deviations. With the sound passing anteriorly, in a case of supposed retro-displacement, the position of the womb—excepting, perhaps, in cases of uterus bicornis—is at once made apparent. The manipulation of the uterine sound, however, is a matter of the greatest nicety, and should be undertaken only after the strictest antiseptic precautions and with the utmost gentleness; little or no force being ever required for its introduction into the uterine canal. The long list of disastrous consequences incident upon the use of the sound, could, in the majority of the in-

*Transactions, 1891.

stances, have been obviated had the precautions which I have just mentioned been observed.

Treatment.—The treatment of uterine versions and flexions, while in the majority of cases simple and easily carried out, in certain instances becomes most difficult and perplexing. In the case of posterior displacements due to adhesions, the method of Taliaferro, which I have within the past few years more prominently called to the attention of the physicians of this State,* is of the utmost service. This consists in packing the posterior or lateral vaginal fornices with lozenge-shaped tampons of cotton previously soaked in a suitable medicament. The elasticity of the cotton causing continued pressure upon the adhesions, results either in their complete absorption, or stretching, with final release of the organ.

In cases which are due to softening of the tissues or to a small fibroid in the uterine wall, the replacing of the uterus by the bimanual method or by means of the sound and the subsequent introduction of a suitable pessary will often result in the complete cure of the condition. In other instances, where the uterine tissue has become so softened as to bend at almost any point along its surface over the top of the pessary, it sometimes becomes necessary to introduce an intra-uterine stem which acts as a splint to the uterus, thus holding it in place. The tolerance of the uterus to mechanical insult is well known, but the introduction of the stem is sometimes followed by the most disagreeable, if not serious, consequences. In the handling of such a case, therefore, it becomes necessary to inaugurate a preliminary treatment which will tend to prepare the uterus for the reception of the stem.* The soft rubber stem introduced by the late Reeves Jackson, of Chicago, is often tolerated at the beginning in cases where the hard rubber stem produces irritation and distress. The gradual toning up of the uterus by suitable applications assists much in this preparatory treatment, so that finally when the organ is found to be in a suitable condition the stem may be introduced and worn for an indefinite period without producing untoward results. In the majority of instances, mechanical support of the displaced organ results satisfactorily and is all that can be desired, but in certain cases each and every attempt at mechanical means to hold the uterus in its normal position proves unavailing, and it is just such cases which give the physician the utmost annoyance and concern.

It is obvious that when all other methods prove unavailing, one of two things must be determined upon: Either the patient must resign herself to the discomforts and suffering produced by the dislocated organ, or some surgical operation for its restoration must be resorted to. In 1881 Dr. Alexander, of Liverpool, and at about the same time Dr. Adams, of London, revived the old operation first suggested (but never carried out) by Alquie, of France. This consisted in opening the inguinal canal, drawing out the round ligaments, stitching them to the pillars of the external opening, and thus literally hoisting and guying in place the otherwise obstinate organ. In the few operations of this nature which I have undertaken, the results have been almost invariably satisfactory. The danger to the patient, where strict antiseptic precautions have been observed, is minimal, and the subsequent condition satisfactory. In performing this operation, the anterior superior spine of the pubes is taken as a land-mark, and, cutting down upon this, the external inguinal opening is readily found. Some difficulty may be experienced in isolating the fibres of the round ligament, which often appears as muscular bundles running through the ring. A careful manipulation of the parts, however, assisted by slight traction, will, as a rule, soon discover the shining white texture of the ligament, and continued traction will result in a considerable portion of the ligament being drawn out through the opening. Various methods have been suggested as to the treatment of the ligament when drawn out. My own preference is to pass a strong suture, preferably of silkworm-gut, through the external pillar of the ring, continue this through the upper portion of the cord, and out through the internal pillar. This is then

*Transactions State Medical Society, 1888. Transactions American Association of Obstetricians and Gynæcologists, 1889.

*Transactions Michigan State Medical Society, 1889.

tied firmly, and the same process repeated on the lower surface of the ligament. The latter is then cut off. The small opening in the skin necessary to the operation may be closed directly and without drainage, provided the operation has been done in an antiseptic manner. A small drainage-tube introduced in the lower angle of the wound has little effect, however, on the healing process, and perhaps in many instances may prove of value. In some cases I have found that, even where the most careful antiseptic precautions have been observed, a certain amount of serous discharge, sometimes amounting to suppuration, would take place and result in the opening of the lower angle of the wound. The subsequent dressing of the wound is that observed in all surgical operations.

A more serious operation for holding the womb in its normal position was devised by Gill Wylie, of New York. Instead of the external shortening of the round ligament, he proposed, and has carried out, an internal shortening. An opening is made into the peritoneal cavity; the round ligament is seized, bent upon itself, and the surfaces thus brought in apposition stitched together, and the ligament thus shortened. The results of such an operation have proved satisfactory in many instances, but still the element of doubt must always enter in such a procedure. When the ligament has been shortened, the uncertainty as to the effect of such shortening, as to the holding of ligatures, and various other conditions, must be taken into consideration.

A method which to my mind is less uncertain is the so-called hysteropexy, or anterior fixation of the fundus uteri to the abdominal wall. This operation has been advocated by Olshausen and other Continental specialists, and in my own experience has proved most satisfactory. An opening through the abdominal wall down to the peritoneum must be made, and the fundus of the uterus scarified by a needle passed through the peritoneum. The organ is then stitched to the abdominal tissues by two or three sutures—which are brought out externally, and removed on about the fourteenth day. To be more certain of results, the peritoneum itself may be cut through and the fundus treated in the same manner as described.

The method of anterior fixation, first described, I believe, by Schücking, consisting in the passing of a suture up through the uterine canal and the fundus, and down through the anterior *cul-de-sac*, is, in my opinion, of too serious and dangerous a character to merit consideration. The very blindness of the operation renders it dangerous, for in the majority of instances it is impossible to determine whether the needle, in passing through the fundus, will not penetrate a coil of intestine lying in the anterior *cul-de-sac*, or even the ureter or the fundus of the bladder—accidents which, in comparison to the condition for which the operation is performed, are as grave as can well be imagined.

32 Adams Ave. west, Detroit.

IS THE DIAGNOSIS "IDIOPATHIC PERITONITIS" IDIOTIC?*

BY JAMES SAMSON, M.D.

I have taken this hurried glance over the peritoneal field and its many disasters, in order that I may have the opportunity before closing of referring very briefly to some of the most recent utterances on a very vital subject.

When Doctor Roswell Park, a few nights ago, had concluded the reading of his remarkable paper on Peritonitis to a large gathering of physicians and surgeons at the Wayne County Medical Society, and was receiving the hearty eulogies of his *confrères*, it was then that a distinguished surgeon made the congratulatory declaration that surgery had made such rapid strides in the field of investigation that we now knew that the man who had made a diagnosis of idiopathic peritonitis had made an idiotic diagnosis.

So crisp an aphorism (if true) deserves an eternal abiding place in the annals of surgery, and if not true should be banished as speedily as possible from the literature of human misery. So strong a reflection

* Concluding portion of the President's address at the February meeting of the Windsor (Ontario) Medical Association.

on the wisdom and records of our professional ancestors deserves, at least, to not go unchallenged, and I humbly submit that the proofs of these very wide premises are yet a long way from complete. That in the olden days, and in the days not yet very old, the causation of many of the forms of peritonitis was terribly misunderstood, must, of course, be conceded, but I have with me to-night proofs enough to convince me that the modern pathologist who believes he has already put his finger on all the causes of this deadly disease may some of these days still find a surprise in store for him.

In the strictest application of the term there may really be no idiopathic peritonitis, and, in a very strict use of the term, perhaps no idiopathic anything; but that there are causes of peritonitic inflammation not yet named by Doctor Park, or any of his coadjutors (in so far as I know), I believe I am absolutely confident of. Bright's disease and scurvy have been proved to be common causes in cases of peritonitis that came not from the appendix and were neither of the conseeutive, tramautic or perforative form. Malaria has been accused of causing a peritonitis that could not be accounted for in another way, and yet quinine has always failed in such an emergency.

The youth who lies down warm on the ice or damp ground, and has a peritonitis the day following, is said to have rheumatism of the peritoneum, though one of the most distinguished authors of our time declares he has never seen such a case and gives not a hint that anti-rheumatic treatment would save the boy. Doctor Park doubts, too, if this variety of the disease does exist, or the malarial type as purely malarial, and asks us to believe that aside from scurvy and Bright's disease and purely consecutive or perforative or traumatic, all other cases found are always the result of an infection. This of course without regard to malignant or tubercular or latent peritonitis, none of which can have any special part in the discussion of this question.

With all the distinguished essayist's conclusions thus far I have no desire to strongly differ, except to suggest that we must accept the so-called rheumatic type under some better appellation or dissent from any plan of accounting for it by the term "infection." The streptococcus and staphylococcus cannot have any causative part in such a case as this, and it is overmuch to ask without absolute proof that we accept colon infection as the responsible source. But, admitting that *all* ordinary cases of peritonitis are infectious and none of them idiopathic, Doctor Park asks us to accept with him the theory, when he has excluded the streptococcus and staphylococcus forms, that all others, or nearly all others, proceed from the appendix and are pure cases of colon infection. That a fæcal mass in passing may irritate the tender lymphoid margin of any appendix, thus closing or partially closing it by tumefaction, and that in the secretions thus retained or partially retained an intense poisonous bacillary commotion and multiplication at once commences, rapidly producing inflammation, strangulation, necrosis, perforation, and infection and inflammation of perhaps the entire peritoneum, and that the potent and deadly agent in it all is the benign *Bacillus coli communis* whose true function in the economy is connected with the assimilation of the food we eat—this is the theory of Doctor Park and those who believe with him that the problem has been solved. The records of recent surgery, the annals of the dead-house, and the experience of every careful practitioner, all do seem to point strongly to the appendix as the pathway by which the infection approaches the sensitive peritoneum; but a theory like this of Doctor Park makes life a frightfully perilous journey to anticipate, if we all are going about with every element of so deadly a disease at so near the exploding point. But if all this be true—and after all it may be—what shall we say of the manner of selecting its victims? Those in the very vigor of life, with all its functions at their best, are well-nigh always chosen, and the constipation and indigestion and indiscretions and decay of later years bring apparent immunity. And finally, if such a theory as this be the true one, what shall Doctor Park's answer be to a statement of the facts with which I shall close this hurried address to which you have listened so patiently?

I have with me to-night the records of two outbreaks of peritonitis, occurring, one in this

county, and one, a year before, in the county adjoining, and although they are both scientifically very incomplete they each contain evidence enough to satisfy me that the disease may, at least sometimes, be epidemic in its form and subject to influences so far outside of the body as to apparently dispose of all possible connection with the *Bacillus coli communis*. In the winter of 1886, near the village of Morpeth, about sixty miles from here, a strong, robust man named Wilson was suddenly stricken down with a violent attack of peritonitis, and was dead on the third day. His was the first case of an outbreak that continued for a couple of months, including about thirty cases, all within a radius of four or five miles in one of the healthiest non-malarial districts in America. Shortly after Wilson's death, his comrade, who had been with him for some time in the same employment, was attacked, and was dead almost as suddenly as his friend. The mortality of this deadly visitation was very great, reaching, so far as I know, perhaps 40 per cent., and including eleven men from seventeen to thirty-five years of age. The records of this epidemic are too incomplete, because of the death of the physician in whose hands nearly all of these cases occurred, and because of the lesser interest that prevailed in reference to peritonitis and appendicitis even eight years ago. I had the opportunity of seeing one of the last of these cases, and found it one of the most violent attacks of general peritonitis, coming on suddenly in perfect health, with much pain and tenderness of the entire abdomen, rapidly assuming a most intense tympanitic form, and not reaching convalescence for about fourteen days. There was in this case, as in many others, considerable epistaxis. Doctor John Stalker, of Ridgetown, one of the most careful observers I know, writes me that he saw a number of these patients and failed to satisfy himself that the inroad of the virus had been by way of the appendix, and that the suddenness of the transition from perfect health to extreme danger seemed too rapid to admit of the theory of which he is a strong disciple. In all of the fatal cases, so far as I can now learn, the course of the disease was very rapid, sometimes not continuing past the second day. As to the question of its epidemic character, I may only add that the number of cases occurring in this small district in sixty days was very much greater than all that have happened in the eight years since, and that the condition of the entire community was for a time one of extreme panic.

A year later than this a similar outbreak occurred in the Essex Centre district, a few miles from our own city, and which seems to have been absolutely identical with that already described. Doctor Dewar, who saw much of this attack and was so impressed with its unusual importance as to report it in the *Canada Lancet*, writes me that he attended eight cases within one month, all in a small area of country; that in every case there was nose-bleed—in two severe enough to require plugging of the nares; that the onset in all was sudden and severe; that the fatal cases lasted not more than four days, and that 50 per cent. of his patients died.

In drawing your attention to these extraordinary circumstances I may venture to remind the members of this Society that, in so far as my very limited knowledge of the matter goes, this especial feature of this subject has not been discussed by any author or any association. I regret that I can tell you so little of the pathology of such a profoundly interesting series of cases; but a consideration of the few facts we are in possession of is quite sufficient to satisfy me of some outside source of infection, and quite enough to make a doubt as to whether this same wandering germ may not be the origin of many an isolated peritonitis, and whether the gentle colon bacillus may not, after all, be the harmless agent of real utility it was intended to be, this crime of human slaughter being often laid to its charge because of its presence on the devastated premises.

Windsor, Ont.,
Feb. 6th, 1894.

THE USE OF THE CURETTE.

BY FANCOURT BARNES, M.D., F.R.S. EDIN.

Curetting the uterus, first introduced by Récamier, is now one of the most frequently performed operations in gynæcology, and is useful in a variety of different morbid conditions. It will, therefore, be useful to bring together a description of the operation and

the various conditions for which it may be performed.

Curetting finds its chief application in the various morbid conditions of the uterus which result from the imperfect evacuation of its contents, after a full-time labor or an abortion. An undetached piece of placental tissue may require removal at once, or, if undiscovered, it may remain in the uterus, seting up inflammatory changes in the mucous membrane, and arresting the normal involution of the muscular wall, thus giving rise to the train of symptoms associated with subinvolution and endometritis. The only cure for these conditions is curetting. Cases will also be given in which the symptoms of endometritis appear to have arisen after labor without any evident retention of placental tissue; and lastly, polypi arising in retained placental tissue may call for the use of the curette. Among the conditions not directly associated with pregnancy, follicular endometritis very often can only be cured by the use of the curette; in this condition, fungous excrescences of the mucosa may be removed from the uterus which in themselves constitute an obvious cause of the symptoms from which it is sought to relieve the patient. In the hands of some gynæcologists, curetting is undertaken in cases of malignant disease of the uterus which do not admit of a radical operation; the procedure removes considerable masses of breaking-down malignant growth, and, by freeing the patient to some extent from the risks of septic absorption, improves her general condition. Lastly, in doubtful cases, curetting may be undertaken for purposes of diagnosis; the nature of an intra-uterine or intra-cervical growth being uncertain, a fragment is removed by the curette for microscopic examination.

It is to be clearly understood from the outset that curetting, being a severe operation, attended by certain grave risks, is not to be lightly undertaken in any case. The operative *technique* is simple, and it is, therefore, likely to be looked upon as a trifling affair which may, without fear, be undertaken by the unskillful. This view is strongly to be deprecated, for from time to time serious complications arise during or after the operation, which call for all the resources of skill and experience.

If the operation of curetting the uterus is to be properly and safely performed, it is essential that the cervix be sufficiently dilated to admit the entrance of the index finger of the operator. Except, therefore, in early post-partum cases, when the cervix has not yet contracted, preliminary dilatation becomes necessary. There are two methods of performing dilatation of the cervix, the rapid and the gradual. Rapid dilatation is performed as the first step in the operation, either by the successive introduction of Hegar's graduated dilators until a size has been passed which allows the operator's finger to follow, or by the use of the metal dilators of Sims or Ellinger. Gradual dilatation is performed by the use of tents, and requires upwards of twelve hours for its completion; it is therefore commenced the night before operation by the introduction of as large a size of tent as the cervical canal will admit without the employment of any force; when in the course of a few hours the tent becomes loose owing to some amount of dilatation having occurred, it is removed and a larger size substituted. Of the two methods of dilatation the gradual is to be preferred; it is, in the first place, a more scientific method to employ a gradually acting force, and the result is obtained with less mechanical injury to the tissues of the cervix. If the cervix be markedly indurated, the rapid method is very apt to cause considerable laceration, which may need repair after the curetting is completed. Gradual dilatation is, moreover, accompanied by such softening of the tissues of the cervix that subsequent manipulations are rendered much more easy. Some operators combine the two methods, and, commencing the dilatation with a tent, complete it by the rapid process. The only objection of any weight that may be urged against gradual dilatation is, that the tents employed sometimes appear to set up septic mischief in the pelvic cellular tissue. When this result does occur it is due to the use of the wrong kind of tent, or to insufficient antiseptic precautions. Sponge tents are to be emphatically condemned; sponge is a very difficult material to cleanse thoroughly, and the risks of septic matters being concealed in its meshes are considerable. It is further very brittle, and apt to

give much trouble by portions breaking off in the uterus. I once spent a quarter of an hour in removing pieces of a broken sponge tent from the uterine cavity, before I could begin an operation of curetting, and although it had only been introduced a few hours there was already marked decomposition of the discharges. Tents made of laminaria (sea tangle) are open to neither of these objections; the tissue is compact and therefore not likely to become the lurking place of septic matters; and in the second place, it is impregnated with the salts of brine, containing much iodine and bromine in the form of iodides and bromides which act as an efficient natural antiseptic. And even with laminaria tents a favorable result is only to be ensured by the most careful adoption of antiseptic precautions throughout. I always employ tents made specially long, at least four inches, and of various sizes. The advantages of a long tent are, in the first place, that it is introduced more readily than the short are, and can generally be passed by the fingers, without the use of speculum, volsella, or tent-holder; in the second place, it is of sufficient length to pass well into the uterine cavity in every case—a point of the greatest importance, for if the tent do not pass through the internal os it is entirely useless. The tents supplied by instrument-makers, in some cases are not long enough to pass through the internal os without being buried in the cervix. The long tents, however, may always be passed well through the internal os, and still be long enough for the lower end to rest against the posterior vaginal wall. Thus the tent is retained in position, and may be readily removed.

The cervix being dilated, the patient is anæsthetized and placed either in the left lateral or dorso-sacral position for operation. If a tent is still in the cervix it is removed, and a vaginal douche is given. The index finger of the operator is then passed into the uterine cavity, carried right up to the fundus, and made to explore the whole extent of the uterine walls and angles. In this way all irregularities or excrescences of the mucous membrane are detected, or the presence of retained placental tissue made out. The finger nail may be gently used to detach these excrescences, and it is on the whole the safest and best curette to employ. It is not sufficient always, however, and it then becomes necessary to employ a curette.

There are two chief kinds of curette, the sharp and the blunt. The type of the sharp curette is Simon's spoon; this is a very efficient instrument, particularly useful in carcinomatous and sarcomatous conditions in which it is desired to ablate a considerable thickness of tissue; used in endometric conditions it requires care and has often in heedless hands caused perforation of the uterus. The most useful blunt instrument is the dull wire curette of Gaillard Thomas. The curette is passed into the uterine cavity as far as the fundus, and being laid parallel with the wall it is made to traverse in succession every part of the anterior, posterior and lateral walls of the uterus, and all its angles. The degree of force required can only be learned by experience, but the minimum consistent with efficiency is always to be aimed at. Some parts of the mucosa may be perceived to be roughened, by the thrill imparted to the hand holding the curette, and to such localities particular attention should be paid. There is generally considerable oozing which washes down into the vagina shreds of mucous membrane detached by the curette. Pieces of placental tissue may be sometimes recognized among them by the naked eye.

When the curette has finished its work the intra-uterine douche is employed; I generally use a weak solution of tincture of iodine (3 j or 3 ij to a pint), given through a gum-elastic male catheter attached to a Higginson's syringe; the catheter is passed up to the fundus, and the dilated cervix allows a free return of fluid. This removes all clots and *débris* that may be left in the uterine cavity, and in addition is an efficient antiseptic and hæmostatic. Many operators afterwards apply strong liniment of iodine to the uterine cavity on a probe. An iodoform pessary, and a dry tampon to absorb discharges, are then placed in the vagina.

There are certain definite risks in the operation of curetting. When first introduced by Récamier, sharp curettes alone were employed, and in consequence of the

comparative frequency with which perforation occurred, the operation fell very much into disfavor. With the blunt instrument this accident can hardly occur unless it be from rough usage, and there is reason to believe that in some cases no harm has followed from the perforation of the uterine wall. Perforation, therefore, is a risk which care may avoid, and which antiseptic methods have rendered much less dangerous than formerly. Gaillard Thomas has noted cervical atresia occurring as the result of complete curetting of the uterine and cervical cavities, but this result must necessarily be uncommon. Troublesome hæmorrhage is said sometimes to occur a few hours after operation, but this is a complication which may readily be met by hæmostatic applications. The most serious complications of curetting are inflammatory troubles arising a few days after the operation; pelvic peritonitis and cellulitis have been frequently observed, and are probably due in every case to absorption by the uterine lymphatics of septic materials, either at the time of operation or as the result of decomposition of the uterine discharges after operation. The proneness of the pelvic cellular tissue to become infected in this way is notorious, and an unfortunate result can only be avoided by strict attention to antiseptics.

I now quote a number of cases from my own practice illustrative of the conditions for which curetting may be undertaken with the certain hope of success, and for which it is indeed the only cure. Incomplete abortion and its results form the best examples of a condition for which there is no other remedy than curetting. These cases may pass into the hands of the gynæcologist at an early period from persistent hæmorrhage, or decomposition of the lochia, or not until months have elapsed and a careful study of the patient's history is necessary to trace the trouble from which she suffers back to its origin in a neglected or misconducted miscarriage.

Case 1.—A woman, aged twenty-nine, married seven years, was admitted to the Chelsea Hospital for Women on June 29th, 1891. She had borne two children, the last being three and one-half years old. She stated that she had suffered from almost constant loss for three months, and thought herself pregnant. On examination she was found to be about five months pregnant, and there was noted a brownish watery discharge. On July 15th abortion occurred spontaneously, and the placenta being adherent was removed from the uterine wall by the finger. On the succeeding days she suffered from abdominal pain and tenderness, the temperature ran up to a few points over 100° F., and the discharges became offensive. As these conditions persisted, on July 30th I explored the uterus with the finger, the patient being under chloroform, and detached several pieces of decomposed placental tissue from the fundus of the uterus. In this case no preliminary dilatation of the cervix was necessary, and the finger nail formed an efficient and safe curette. In puerperal cases it is rarely necessary to use the metal curette, and it is further undesirable owing to the ease with which perforation of the softened uterine wall may occur. The operation was successful, and the patient left the hospital cured in ten days.

Case 2.—Patient, aged thirty-eight, married seventeen years, was admitted to Chelsea Hospital July 16th, 1886. She had had six children, and one previous abortion. Twelve weeks ago she had a miscarriage at six and a-half months, and ever since has suffered from continual hæmorrhage, with smart floodings in addition on three distinct occasions. She complained of severe throbbing pain in the left iliac region, with tenderness and a sensation of dragging there. On examination the uterus was found to be bulky, the sound passing three and three-fourths inches in the normal direction; the cervix was patulous, and the left ovary prolapsed. The following day the patient was anæsthetized, and with the curette a piece of placental tissue as large as a normal ovary was removed from the uterus. Twelve days afterwards the patient left the hospital cured.

Case 3.—Patient, aged twenty-seven, married five years, was admitted to Chelsea Hospital January 11th, 1890. She had had three children, the last being eleven months old. After her last confinement she did well for three months, when menstruation returned and she was then regular for three months. At that time, however, she had to take a railway journey, and free hæmorrhage occurred accompanied by great pain in the left side; this hæmorrhage continued to some extent for two months, when it yielded to treatment, but the pain in the left side continued. For a month she continued fairly well, but at the period the bleeding recurred and continued up to the time of her admis-

sion. She had thus suffered pretty constant loss for five months. On January 21st I explored the uterus, after fully dilating the cervix, and detached a polypus which, there seemed no doubt, had arisen from a placental fragment left in the uterus eleven months before. The polypus, owing to its size, could not at the time be removed from the uterine cavity, but it was expelled spontaneously on the third day after the operation. The patient made a perfect recovery.

Case 4.—Aged forty-five, married twenty-one years; was admitted to Chelsea Hospital for Women on December 21st, 1885; had had five children. Her last pregnancy terminated in a miscarriage at the third month, twelve years ago. Ever since she had suffered from the symptoms of menorrhagia, metrorrhagia, leucorrhœa. At examination the uterus was found to be enlarged and anteflexed, the sound passed three and a-half inches in the normal direction, and detected a marked irregularity upon the posterior uterine wall toward the fundus. On December 24th the uterus was curetted, the cervix having been fully dilated by the use of tents. Some soft friable tissue was removed from the posterior uterine wall, and tincture of iodine applied to the cavity. The operation was entirely successful in relieving the symptoms.

The remaining two cases illustrate conditions which call for curetting, not to be referred to any of the accidents of pregnancy or labor.

Case 5.—Woman aged twenty-two, single; admitted to Chelsea Hospital October 14th, 1884. Menstruation began at the age of sixteen and was very irregular until a year ago, several periods of amenorrhœa having occurred. She now complained that for the last year she had had constant pain when up, round the back and lower abdomen, and a continual slightly colored discharge; at the monthly periods there was very little alteration in the discharge. On examination the uterus was found enlarged, the sound passing three and a-half inches in the normal direction, and giving a sensation of grating in some parts. The cervix was dilated, and the uterus explored with the finger; several irregular outgrowths were observed in the uterine mucosa, and removed by the curette. The patient was entirely relieved of her symptoms.

Case 6.—Patient aged forty-four, married twenty years; admitted to Chelsea Hospital for Women on November 27th, 1890. She had had one child, born twenty years ago, and since then she had never been pregnant. During the last five months she had suffered from nearly continual hæmorrhage, with latterly a great deal of pain, most marked in the left iliac fossa. The sound passed three inches in the normal direction; the uterus was very bulky, and there was no other morbid condition to be detected in the pelvis. On November 29th the uterine cavity was explored with the finger, but nothing abnormal could be detected; the walls were then carefully curetted, and this was followed up by an application of liniment of iodine to the curetted surfaces. The patient made a good recovery, and was discharged at the end of a month entirely relieved.

London, Eng.

ARTIFICIAL VESICO-VAGINAL FISTULA FOR THE EXAMINATION AND TREATMENT OF URETERAL DISEASES.

BY BENNET B. BROWNE, M.D.

My attention was first directed to this method of examining the ureters several years ago in a case of vesico-vaginal fistula which I was preparing for operation. The fistulous opening was so close to the orifice of the ureter that I could easily see the urine coming out; by hooking a tenaculum into the vesical mucous membrane the orifice of the ureter was everted so that the urine poured directly into the vagina, and a small catheter could be readily passed up the ureter nearly its whole length, and urine drawn off through it.

The method I use in examining the ureters is to place the woman in Sims' position, introduce a broad but short Sims' speculum, then, with a large steel sound in the bladder and its point turned towards the vagina, cut down upon it and make an incision from two to two-and-a-half inches long; then pass a silver wire two feet long from the vagina into the bladder, about one-half inch from the line of incision, bringing it out again on the other side at the same distance from the incision; next pass another similar wire near the other end of the incision; then with a tenaculum pull the loop through from the bladder, when with traction upon the wires the bladder surface may be opened and inverted into the vagina. The orifices of the ureters will then be in view, and catheterization and inspection may be readily performed.

In many cases in which a morbid condition of the ureters is suspected (and almost inva-

riably when such condition is found) there is also a diseased condition of the bladder; so, therefore, in these cases, instead of closing up the incision I cut the wires at the loop, and bring the vesical and vaginal mucous membranes together, thus keeping the incision open and securing constant drainage from the bladder.

Whether disease of the ureters is secondary to previous disease of the bladder is not a settled question. But I think we can affirm that a diseased condition of the ureters, causing an exfoliation and desquamation of their lining membrane and the decomposition of this in the bladder, will surely cause alkaline urine and cystitis. Should the urine become purulent, a constant re-infection of the ureters will occur.

When is borne in mind the great propensity of gonorrhœal matter or infection to follow the course of organs lined by columnar or cylindrical epithelium, skipping over or abruptly stopping at those lined by the squamous variety, there is good reason for believing that the ureters (which, according to Kolliker and Luschka, contain a certain amount of cylindrical epithelium) are more frequently affected, primarily, than is the bladder, the disease extending from the urethra to the ureter. Latent gonorrhœal matter, or that in subacute form, will travel along the uterus and tubes, skipping entirely the vagina, and stop at the outer extremities of the tubes where it comes in contact with serous membrane containing squamous epithelium, unless reinforced by some septic material which has a special influence over this latter variety of epithelium.

Hart and Barbour follow the drawing and description of Holl (which, so far as I have seen, seems to be the most clear and correct), describing the ureter in four parts, as follows:

1. *From the brim of the pelvis to the origin of the uterine artery from the internal iliac.*—About six-tenths of an inch below the division of the common iliac artery into its external and internal branches, the ureter passes over the external iliac vessels, and lies in front of the internal iliac artery and then in the space between the internal iliac artery and external iliac vein; so far, the portion described is at or about the level of the pelvic brim.

The ureter next passes down into the true pelvis, and at the origin of the obturator, vesical and uterine arteries begins to describe a bow-shaped portion 3¾ inches long, with the greater convexity of the bow where the uterine artery crosses it. By this crossing the bow-shaped portion of the ureter is divided into an upper and a lower part.

2. *From the origin of the uterine artery to where the ureter is crossed by it.*—This is the *upper* part of what is known as the bow of spindle-shaped portion.

3. *From where the ureter is crossed by the uterine artery to the bladder.*—The lower part of the spindle-shaped portion. The uterine artery as it crosses the ureter is separated from it by a venous plexus. In this way a distance of about two-fifths of an inch separates ureter and uterine artery at this point.

At the level of the os uteri externum the uterine artery crosses the ureter to reach the uterus, and at this point the ureter is three-fifths of an inch distant from the cervix. The course of this portion is of great importance; it is 1¾ inches long, lies in relation to the side of the vagina, and then, for the last four-fifths of an inch before it pierces the vesical wall, lies between the anterior vaginal wall and the posterior wall of the bladder. The ureter does not pass lower, therefore, than about the middle of the anterior vaginal wall.

4. *The portion piercing the bladder.*—The ureter runs through the bladder wall obliquely downwards and inwards for from six-tenths to eight-tenths of an inch.

The following interesting case, showing some of the effects and symptoms of ureteral disease, was reported by me several years ago (1880) at the annual meeting of the Medical and Chirurgical Faculty of Maryland:

Mrs. M——, living in Baltimore County, about 35 years of age, passed bloody urine for more than a year; the blood increased in amount until in some specimens one-half was blood.

At times she had violent attacks of pain on the right side, in the direction of the ureter, and colic so severe as to terminate in almost complete collapse.

During these attacks her urine would become perfectly clear and limpid and was passed in larger quantities than usual.

After using such treatment as I thought might palliate her suffering, and failing to obtain any improvement in her condition, on Sept. 4th, 1874, I put her under chloroform and dilated the urethra until my index finger could pass in easily. The upper portion of

the bladder was rough and corrugated, more particularly on the right side, and in the situation of the right ureter I found an opening nearly large enough to admit the finger. The bladder was considerably enlarged.

A severe hæmorrhage from the bladder came on as the result of the prolonged exploration, which caused me to desist from any further examination at the time. The hæmorrhage ceased in about half an hour, and I left her. In the evening a second profuse hæmorrhage supervened and continued at intervals; during the night she passed a large number of what her sister described as hydatids, about one-fourth of an inch in diameter and covered with a skin like a grape.

No further examination of the bladder was made, as the bloody urine gradually became less, and she had no more attacks of pain.

My explanation of the case was that the hæmorrhagic urine was caused by the presence of hydatids in the right kidney and ureter, which at times blocked up the right ureter and caused the attack of kidney colic; and this also explained why it was that during these attacks of pain the urine was always clear and limpid, for then the blood was shut off from the right ureter, and only the urine from the healthy left ureter entered the bladder.

Baltimore, Maryland.

THE DANGERS OF INFECTION BY PERSONAL CONTACT WITH DISEASES NOT REGARDED AS ACTIVELY CONTAGIOUS OR INFECTIOUS.*

BY J. W. IRWIN, M.D.

For many years there have been certain diseases generally deemed not contagious or infectious, and yet persons known to be in good health before coming in contact with those afflicted by these diseases often became victims. The *materies morbi* which were at work causing many diseases were accounted for hypothetically only, until Koch announced his discovery of the germ of consumption. Then it was that important light was thrown upon the spread of maladies which hitherto had been shrouded in mystery. Since Koch's important discovery of the tubercle bacillus, the science of mycology has received new impetus, and it is making rapid progress in the search for truths.

The danger of certain insidious diseases being transmitted by contagion or infection was, before Koch's discovery, too little regarded by physicians. Now the importance of prevention is being more fully appreciated, and is receiving careful consideration at the hands of physicians and others whose duty it is to protect the health of those whose lives are entrusted to them.

Another important and more recent discovery has been made in the fact that there are certain disease germs which do not live in the normal air, and others that do live and thrive in it. Whether or not this peculiarity applies to any of the germs found in the diseases of the air-passages, I have seen no mention made of it.

Now let us consider the character of the excretions and exhalations which are present in every person in a state of health, and we find certain poisonous ingredients which render their immediate atmosphere impure. When these poisonous products are inhaled, they tend to weaken vitality and render the recipient more susceptible to the action of disease germs, while had these products been first subjected to the free air, their properties would have been changed and made inert.

In those suffering from disease, more poisonous products are present in their immediate surroundings, and in addition there are disease germs awaiting a suitable soil in which to grow and multiply.

There are many diseases of the air-passages—indeed nearly all of those affecting the mucous membranes—that are now recognized as contagious or infectious, as well as the more insidious disorders which affect the lungs. Contact with these diseases renders the subjects more liable to be infected by them. Children sleeping together in the same bed often convey the seeds of disease through the respired air, which a distance of a few feet from each other might have prevented.

Imagine, by way of illustration, two persons occupying the same bed, one of whom is ill and the other well; the well one is inhaling the breath as it leaves the nostrils of

*Read before the Louisville Medico-Chirurgical Society, January 5th, 1894.

the sick, warm and laden with its millions of disease germs—and it will be readily understood how even insidious diseases not actively contagious or infectious may be transmitted to others. There are few physicians who have not been brought face to face with the sad scene of a home deprived of its most useful member for the want of precaution against those insidious germs which were conveyed from the lips or in the respired air from the lungs of a bedfellow who was the victim of consumption. It is, therefore, no longer any surprise to find that the husband or wife has become the subject of consumption after sleeping in bed with the other, being a victim to that insidious malady which knows no foe.

The remedy for this evil suggests itself, and has already received some recognition abroad. Do away with the use of double beds, and replace by single ones furnished with separate clothing. The same room may be occupied by the husband and wife, and the beds placed near enough for companionship. This arrangement will cause poisonous exhalations to become diluted and changed by the air, and thus rendered less injurious to health when again inhaled. The arrangement, moreover, will, in most cases, tend to preserve that sense of delicacy which closer contact sometimes dulls.

Again, when persons are fatigued by overwork or mental worry which gives rise to insomnia and restlessness, or when necessity compels to leave the bed, the companion will not be awakened or otherwise disturbed. Sensitive and wakeful persons who occupy beds together are apt to be annoyed by heavy breathing, snoring, etc., which distance would render much more endurable. Late or irregular hours on the part of a companion for retiring often awaken the sleeper, and his sleep is over for that night.

Many other illustrations might be given to show the injurious effect of persons sleeping together.

We live in an age of reason and observation, and as guardians of the public health, true to our trusts, it is our duty to consider matters of such vital importance as referred to in this short essay.

Louisville, Ky.

CASES OF REFLEX MORBID CONDITIONS ARISING FROM UTERINE DISEASE.*

BY FORREST F. BELL, M.D.

If you will permit me I will relate two cases in which morbid conditions arising were eventually proved to be purely of reflex origin.

Case 1.—In June, 1880, Mrs. B——, aged forty, suffered from a swollen and apparently inflamed knee, very painful to touch. The temperature of the joint was slightly increased; there seemed to be an effusion into the cavity, but there was no pitting on pressure. There was slight retraction in the limb, and a position calculated to give the greatest ease was chosen. I may here remark, so far as could be ascertained she had not sustained the slightest injury to which it could be attributed. Matters went on in this manner with very little mitigation for nearly three months, and yet her constitution did not appear to suffer much on account of the local disease. In the meantime the joints were subjected to all the most approved modes of treatment for acute inflammation: absolute rest, dry hot salt applications, etc.; on another occasion to fomentations, and later on to blisters and mercurial inunctions; in the meantime constitutional measures were undertaken by means of iodine, colchicum, iodoform, etc., etc. Later, discovering evidence of irregular uterine function, an examination was sought, which disclosed two polypoid growths, one extruding from the open os, the other attached to the anterior lip of the cervix. There was likewise extreme uterine hyperæmia, evidently persisting from one menstrual period to the next. The polypi were twisted off, and their bases touched with nitrate of silver; strong carbolic acid was carried by means of probe and absorbent cotton up into the cervix and on into the cavity of the uterus itself, and the application continued until the surfaces were healed. On three occasions, each shortly after the menstrual period, the cervix was freely scarified, which aided materially in relieving the hyperæmia. During the molimen, rest on a sofa was insisted on.

Constitutionally, the woman was put upon the syrup of iodide of iron in fifteen-drop doses administered three times daily. The knee was tightly strapped with adhesive plaster, and subsequently more active motion of the joint advised. Recovery began to take place in about twenty-eight days

*Read before the Windsor Medical and Surgical Association, Windsor, Ontario, February 6th, 1894.

upon removal of the polypi, and in eight weeks was wholly complete.

Case 2.—Reflex Aphonia. Mrs. D—— was delivered of her fourth child on February 9th, 1887. Partly on account of defective sanitary conditions at home, and partly owing to a constitution sadly run down, she had an indifferent getting-up from childbed. Ten weeks after accouchement I found her still with a sanguineous discharge from the uterus, wearing and tearing pains in the loins and thighs, partial prolapse, general irritability of the stomach and bladder, and inability to take any extended exercise. Indeed, all the more prominent symptoms of subinvolution were present, but in addition there was a weak and husky voice, which ultimately became so reduced that it was only a low whisper; any effort at speaking occasioned a sensation of fatigue and pain, with dryness in the throat. Quinine, iron and strychnine were prescribed, likewise inhalations of creosote dropped on a sponge previously dipped in boiling water; I also tried blistering over the larynx; but these and many other measures undertaken proved utterly futile. Finally I took her to see a specialist in Detroit, who instituted a very thorough laryngoscopic examination but was unable to discover any cause for aphonia or, indeed, any untoward condition except that the cords were generally relaxed and did not draw up when phonation was attempted.

Circumstances ultimately caused me to give more particular attention to the condition of the reproductive organs. On exposure of the neck of the uterus by the aid of a Sims speculum, free scarification was resorted to with a view to relieving the intensely congested condition that presented. This was again repeated after an interval of a few days, and the local depletion further carried out by application to the cervix, twice daily, of cotton wool saturated with glycerin. Still later, the mucous lining of the fundus was stimulated to healthy action by passing over its surface every sixth day a saturated solution of nitrate of silver by means of probe and absorbent cotton.

With a view to remedying constitutional defects, she was placed upon fifteen-drop doses of muriate tincture of iron, combined with a like quantity of Parke, Davis & Co.'s fluid extract of Ergot (now I would use the Normal Liquid), given three times daily. The rapidity with which the voice returned as the treatment progressed was not only satisfactory, but almost astonishing, and phonation was fully established ere this treatment was abandoned.

There are a number of morbid conditions which arise reflexly from a diseased uterus. Time will not permit to discuss this more fully. I will mention, however, the case of a lady who during pregnancy suffered from a cough that resisted all treatment until an ulcerated os was relieved. Indeed, one need not be surprised to learn that there are such a number of reflex diseases, especially when it is known that the rapidity of the propagation of nervous excitation in man is about two thousand feet per second, and that consequently there are two thousand waves of irritation falling against every diseased part every sixtieth part of a minute. Is it any wonder then that a roughly formed cicatrix will sometimes induce a tetanus leading to epileptic convulsions, etc.?

Windsor, Ontario.

Correspondence.

Editor MEDICAL AGE:

I have a little "story to relate" regarding Cascara Sagrada:

One day last June I was called to see a patient in this city who was confined to his bed with general tuberculosis. His condition was pitiable; and without going into symptomatic details I will merely add his bowels were the cause of much trouble, not only to himself, but to his nurse—for when I found him, a debilitating diarrhœa was the most urgent symptom, and a condition which took some days to check, and when so checked resulted in most obstinate constipation. When constipation supervened upon flux it was relieved only by the strongest measures, and then invariably resulted in hyper-activity of the alimentary canal, which speedily left the patient in as bad a way as at first.

It was just after an unusually severe attack of diarrhœa, and during the supervening stage of constipation, that I ventured to employ Fluid Cascara Aromatic. I gave twenty minims twice daily and placed the patient upon a most carefully selected diet. On the morning of the third day I was agreeably surprised to find the patient's bowels had moved during the night quite naturally. The action of the Cascara was then followed up by an enema, and so the good work was continued until the Cascara was exhausted. I again prescribed Cascara Aromatic, but was fated to meet with disappointment; it was continued for three days, when the discovery was made the preparation was not that

ordered, viz., that of Parke, Davis & Co., but another product. Returning then to the original Cascara Aromatic, two days of its use once more put the patient's bowels in proper shape. And so through six weeks' illness I used this drug with most favorable results.

This may seem a little extravagant and like heralding a panacea for constipation, but I do not wish to be understood in that way. The point I wish to make is merely that Fluid Cascara Aromatic apparently exercises a most judicious tonic effect upon the alimentary canal, tending to restore to the sluggish intestines normal rhythm and activity.

Most sincerely yours,

ARTHUR E. GUE.

120 East High St., Detroit, Mich.

A NEW REMEDY FOR ENLARGED PROSTATE.

Editor MEDICAL AGE:

Some two months ago I was at my wits' end to relieve a patient, aged sixty-nine years, who was suffering from an enlarged prostate accompanied by great pain immediately before, and for half an hour after, urinating; micturition was frequent and imperative, and but a small amount passed at a time. I tried all the classic remedies, but with very little success, when it occurred to me, considering the action of Liquor Sedans upon the uterus, and the analogy that existed between that organ in the female and the prostate gland in the male, that this remedy might be beneficial. Accordingly I prescribed one teaspoonful of Liquor Sedans to be taken every hour, and continued until some definite results accrued. Somewhat to my surprise, in spite of this modicum of faith I had, after the third dose the man became quite comfortable. He is now taking two or three doses daily, with the result of finding his life full of sunshine and pleasure instead of one long agony. Just exactly how Liquor Sedans acts in this case, I do not feel myself competent to give an opinion further than that it appears to exercise a functional property—that is to say, it regulates function.

I have since used the remedy in a number of similar cases, and with satisfactory results.

Very sincerely yours,

A. T. SPEER.

Newark, Ohio,
February 3d, 1894.

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[This is altogether a new application of Liquor Sedans. Several cases have recently come to our notice in which the remedy has proved highly beneficial in this class of cases, and in those where it was least so it acted as a palliative.—ED.]

Society Meetings.

WINDSOR MEDICAL AND SURGICAL ASSOCIATION.

The regular monthly meeting of the Windsor (Ontario) Medical and Surgical Association was held Tuesday evening, February 6th, 1894, at the residence of Doctor Forrest F. Bell on Bruce avenue.

The chair was occupied by the President, Doctor James Samson.

Present: Doctors Samson, Carney, Casgrain, Cruickshank, Reaume, Bell, Teeter, Ashbaugh, Hamilton, Paré, and Brooke.

The minutes of the previous meeting, having been read, were duly passed upon and approved.

The President nominated Doctors Cruickshank and Reaume a committee to draft resolutions embodying the grief of this Society at the demise of one of its members, viz., Doctor Langlois, and to convey the condolence of the Association to the widow of the deceased.

Doctor Forrest Bell read a most interesting paper entitled "A Few Cases, with Treatment, of Some Morbid Reflex Conditions Arising from Diseases of the Uterus" (see page 109).

The paper was discussed at length by all the members present.

Doctor Samson then addressed the Association regarding "The Character and Origin of Peritonitis" (see page 100), which also was duly discussed by the Association.

After partaking of the hospitality of Doctor Bell, the Association adjourned to meet at the residence of Doctor Carney, Tuesday evening, March 6th, 1894.

D. S. BROOKE,
Secretary.

Windsor, Ontario.
February, 1894.

LAWSON TAIT ON BACTERIAL PATHOLOGY.

Mr. Lawson Tait is probably the most aggressive opponent of the germ theory of inflammation. He says that during his professional life he has learned and unlearned some four or five theories of inflammation, and predicts that the present prevalent theory—a phase of lunacy; coccophobia, he calls it—will soon go the way of the other theories.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., FEB. 26, 1894.

Editorial.

THE PERILS OF MEAT-EATING.

Elsewhere in our columns will be found two excerpts, one from the *Sheffield Medical Journal*, and the other from the *Gentleman's Magazine*, which appear to be diametrically opposed to each other regarding the influence of animal diet.

In the first-named excerpt it is boldly stated that the use of meat three times daily is practically certain to induce interstitial nephritis. On the other hand, the second journal conveys the idea that an exclusive meat diet is the great desideratum for those who would be strong, healthy, and every way hardy.

Each assertion is made in a somewhat loose manner, and furthermore from only the one individual point of view, which fully explains the apparent discrepancy. The statement of the *Gentleman's Magazine* the editor of this journal can vouch for as truth in so far as the one side of the subject is concerned. It is a fact that the Guachos of the pampas, and likewise the Indian races inhabiting the great South American plains, are men of most extraordinary physique and wonderful endurance, and that alike they depend solely for sustenance upon a meat diet; as regards the former, they never ingest any form of cereal except when visiting wayside posadas or some of the towns, and then are more likely to dilute their animal diet with strong alcohol than with anything else. Further, the fact must be recalled that the Indians of our own plains for the most part, in the past, have relied almost exclusively upon the same sort of diet—the flesh of the bison, wapiti, deer and antelope was alike "bread and meat;" and that while, in the earlier history of our country, tribes near the Atlantic Coast were accredited with raising maize and collecting mast and roots, the chief portion of their living was nevertheless animal.

To reconcile two such apparently widely divergent contentions will at first thought seem an impossibility, but careful consideration of the facts and of the side issues involved places quite a different phase upon the matter.

The inhabitants of South American pampas are active men, continually subjected to the influence of the finest atmosphere in the world. From early morning until late night they are scarce ever out of the saddle, but continually galloping at the full rate of speed of their cattle—no Guacho ever walks, for he would consider it a degradation to even cross a public plaza except on horseback. On the contrary, the civilized meat-eaters of North America and Europe are very largely men of sedentary habits—those who sit in office chairs during the greater portion of the day and are devoted to brain work, a class of labor that itself tends toward nephritis; moreover these sedentary workers are usually bad diners, especially so in the United States. They are continually subjected to a diet that is illy cooked, illy served, and to a habit which induces bolting of food. In no country is there so much miscellaneous ingestion, so much so-called dyspepsia and neurasthenia, which in the majority of cases arise from indigestion and the other evils of bad feeding purely. Interstitial nephritis is much less common in Great Britain, and even in Canada, than in the United States, for the reason that the inhabitants of these countries feed better—their cookery is of an entirely different character, the meats are carefully selected and properly served, and the heaviest meal is appointed for that portion of the day when the work is done, permitting of all food being leisurely masticated and ingested, and placed in the best possible condition for digestion and assimilation. In the United States, on the contrary, the digestive organs are constantly being crowded to their highest capacity, and overburdened with a miscellaneous assortment that is imperfectly chewed and tends to create the very troubles that first induce functional, and later on organic, disease of both heart and kidneys.

It is evident, then, that meat-eating *per se* is not a cause of interstitial nephritis, since a

careful examination of the physiological and anatomical relations of man evidences that he has been in the past eminently calculated for devouring flesh food, and that at the present time the modifications that have taken place in his organism favoring vegetable diet have not displaced certain prominent characteristics leading to the former. Moreover, it is impossible to point out any strict vegetarian possessed of broad, enduring mental or physical capacity. Many of those who esteem themselves such forget that the vast quantities of milk ingested are after all but a phase of animal diet.

It would be as great a folly to endeavor to teach the people of North America and Europe to abandon the mixed diet for one of exclusive fleshy character, as it would be to endeavor to impress the South American Guacho with the necessity for dropping a pastoral life and assuming one of an agricultural character for the sole purpose of supplying him with cereal food. It is the relations, the surroundings and the habitation that make the difference. It is, moreover, extremely doubtful if one out of six cases of interstitial nephritis can with any certainty or even probability be traced to a meat diet *per se;* rather, such cases arise solely from those indiscretions at table which, with any people, if persisted in, cannot but bring about circumstances extremely infatuitous.

Mrs. Ernest Hart is accredited with saying that meat-eaters are bad tempered. This is certainly new to us, and we always supposed her spouse, the erudite editor of the *British Medical Journal*, in spite of strong personality and marked convictions of positive nature, was at least genial.

A glance at the history of Great Britain, a country that for so many years has been the practical "mistress of the seas," does not seem to carry out this idea, for the sturdy yeomanry of this Island are universally meat-eaters. And in earlier times, when England began to assert her supremacy, the bulk of the population were equally partial to this kind of food. The same gentlemen, too, who have suffered the burning heats of tropic Africa and the ice-bound regions of the frigid zone in the interests of science, who have climbed the highest mountains, and penetrated and explored the trackless deserts and dank noisome swamps and jungles, were quite the reverse of vegetarians. "The Roast Beef" of old England has in fact become a synonym of all that is enduring, manly, upright, and if it has not been adopted in our own country as a suggestive motto, the practical results accruing to such diet are everywhere visible and in direct contrast to vegetarianism.

There has been much written on the mildness of temper possessed by vegetarians, but the fact remains, as recently pointed out by Professor Remondino in the *National Popular Review*, that the Hindu professional assassin or murderer is probably as cold-blooded and as ferocious a being as one may imagine; that than the Chinese, who are a nation of vegetable- and fish-eaters, there is no race more blood-thirsty and bellicose, more wild and unmanageable when aroused. *Per contra*, the native Californians, like the Guachos of the wild pampas of South America, who lived on an almost exclusive meat diet, were generous, self-composed, and not in the least given to either strife or bloodshed.

We are aware the Scotch and Irish are frequently cited as hardy people and practical exponents of vegetarianism, but the former invariably "have milk tae their meat" (*Anglice*—with their oatmeal), and the hardiness of the Celt across the St. George's Channel is only an exemplification of "survival of the fittest" so far as the potato-devouring districts are concerned, and from these districts in the main are derived those bodies of Irish who have in many cases made the national patronymic a synonym for barbarity and cruelty. In the east and north of Ireland the diet is universally more liberal than elsewhere, and except in the wilds of Galway and Donegal perhaps there are few districts in which goats' milk does not to a considerable, and even general, extent enter into the sustenance of the poorest. The "Wild West" of the Emerald Isle possesses a population that in its lower strata is little removed from savagery, and in no portion of the world, except in the Celestial Kingdom, is a fish and vegetable diet more exclusively the support of the masses. Of what transformation an exclusive vegetable regimen is capable of inducing, one may have ample evidence by visiting and studying the Prince Michael Colony, or, as they denominate themselves,

"New and Latter House of Israel," in Detroit, for with these people even milk and eggs are under the ban. On the other hand, the wild Celt of Ireland, on deportation and under the beneficial influence of meat diet, which he speedily adopts in the United States, quickly loses those elements of savagery which were his characteristics in his native haunts.

NEWSPAPER PRESCRIBING.

There appears to be a craze among all classes, conditions and grades of people for dabbling in physic, but if there is any one class more than another who are particularly prone to "rush in where angels fear to tread," it is the lay journalist—"him who runs the family newspaper."

Recently the editor of a certain family paper, published less than a thousand miles from New York City, undertook to make a leading feature of its "Medical Department," which was well and duly advertised. In course of time the manager of this "department" prescribed a "cure" for some malady, real or fancied, on the part of one of the subscribers, and in this cure strychnine was one of the ingredients. A daily contemporary, strange to say, discovered the quantity of alkaloid prescribed in each dose would be fatally toxic. *Four weeks* after the first paper had published this cure it ventured to insert an editorial note to the effect that the error was "due to the carelessness of the typo" (what a blessing that the typo can be made to assume all the asininity of authors) who had made the quantity of poisonous drug to read four times greater than was intended.

What the consequences of this error have been, or might have been, is left entirely to the imagination; and yet this is only a type of the general prescribing by the laity.

It was only recently that we picked up an agricultural paper in which was given the formula for a liniment warranted to cure all forms of lameness, to say nothing of other maladies which horses and cattle are heir to, and which, had it been compounded as written, would have resulted in an explosion; and in case such an accident were avoided, the amount of acid nitrate of mercury embodied, if applied according to directions, would speedily have insured the demise of an elephant.

And yet, in spite of such gross errors, for which there seems to be no law, and in case of fatality no redress, the public are only too ready to accept and try anything that "newspaper men" may suggest.

Some years since a paper of quasi-humorous character started an enterprise very like that first mentioned, and which was under the editorship of a local doctor possessed of more zeal than patients or patience. A large amount of space was devoted to the subject, and the management dwelt with admiring fondness upon the enterprise, which, however, at the end of a few issues was mysteriously dropped, for reasons which can be better surmised than told.

MANAGEMENT OF GOITRE.

In a recent number of *La Semaine Médicale* Doctor Mensul makes the declaration that the internal administration of digitalis in connection with the external use of potassium iodide is *the* most efficacious treatment of goitre.—The favorable action of digitalis is accounted for by its influence on arterial tension; and further is added the decisive information that hypertrophy of the thyroid under this dual medication, even after effectually resisting iodides alone, disappears with astonishing rapidity.

After considerable experience with goitre we are inclined to accept the foregoing statement with considerable mental reservation, and are led to this fact for two reasons: First, the employment of digitalis, far from being new, was advocated by Murray more than a century ago: Second, we have found cadmium iodide far more efficacious as an external application than the potash salt, and in some few cases that a saturated solution of ammonium muriate was more effective than either. So far as personal experience goes, external medication was apparently materially aided by ingestion by the mouth of *liquor arseni et hydrarg. iodidi.*

As regards potassium iodide for internal administration, it is a well known fact that it cannot in the majority of cases be borne in the doses necessary to procure thorough saturation of the economy with the salt.

This objection, however, may be readily obviated by substituting sodium iodide for the potassium salt; the former is much the better preparation under all circumstances—it is more readily borne, less unpleasant to taste, and, finally, it represents a greater proportion of iodine.

One peculiarity of the use of muriate of ammonium as an external application to a goitre is that when the salt begins to lose its efficacy, about the same time the patient complains of tasting the drug in the throat.

Cadmium iodide induces no vesication and very slight discoloration, but when employed in conjunction with fatty substances the amount put up should be very small, it requiring to be freshly made every two or three days. A pure oleic acid is perhaps the best vehicle for this salt.

GLYCERIN AND CITRULLIN SUPPOSITORIES.

It is well known that the employment of small quantities—one to four drachms—of glycerin by enema is a satisfactory remedy for habitual constipation due to sedentary habits and inappropriate food. The introduction of glycerin suppositories, however, has done away with the trouble experienced in handling the fluid in connection with a syringe; and a single suppository repeated at the same hour each day, it is now understood, will induce a regular action of the bowels, and that too without inducing greater constipation on suspension of the remedy. Glycerin suppositories, however, it must be remembered, are only efficacious when the rectum contains fæces, when they will bring about a physiological evacuation—that is to say, the stools are not diarrhœic. After the evacuation of the rectum the contents of the sigmoid flexure and the large bowel are successively evacuated.

Suppositories, as a rule, are ineffective where constipation is due to febrile diseases, to affections of the brain and spinal cord, or to mechanical obstruction of the intestinal circulation. In such cases, however, the same suppositories, fortified by the addition of Citrullin, will secure in most satisfactory manner the desired result; the latter are especially recommended by Anacker in these cases, and he considers them demanded as the first procedure in the management of irreducible hernia. He has also noticed an increase in number and intensity of labor pains after their use, and remarks: "They seem particularly indicated as an evacuant of the bowel before or during confinement."

SUGGESTIVE SARCASM.

The *Medical Record*, commenting upon an article that appeared in the *Philadelphia Medical and Surgical Reporter*, remarks:

If they really need more professors over there in Philadelphia, we might, on a pinch, let them have a few of our own. A famine of professors is not what we are seriously threatened with in New York.

To this the *Reporter* suggestively retorts:

More professors! "Angels and ministers of grace defend us!" If by the most violent squeezing a few efficient teachers may be extracted over there, Philadelphia can offer them a field for work and contemplate the gift with equanimity. But . . . we must respectfully and firmly decline to have any more professors unloaded on us. However glad to accommodate friends, Philadelphia must enforce the first law of nature.

So far as there being in this city any lack of professors, our factories annually produce more men with professional aspirations and qualifications (as can be certified by every member of their immediate families, relatives by blood or marriage, or any socially connected with them, their domestics, employés or clubmates) than the entire number of professorships existing in the United States. What Philadelphia does lack is cold storage facilities for the safe keeping of "professors" for the benefit of posterity.

Efforts have been made to meet the conditions, but the problem appears to be similar to the social question of the treatment of the unemployed, but on a more reduced scale. Some institutions have experimented by taking a chair, none too large for a single teacher, dividing it, and constructing two or more *high* chairs suitable for *professors*, imposing a high tariff for revenue and installing the most needy applicants.

The results of such speculations appear to have been more for edification and less for education. The cost of "chairs" seems to have grown beyond the reach of private re-

sources, and they now require a subsidy from the Government to maintain them. Indeed, it looks as though "professors" would soon require a congressional appropriation, either under a River and Harbor bill or a Deficiency appropriation, to secure an opportunity for letting men see their light shine. "Professors" are too numerous, and "chairs" cost too much, and we don't want them anyhow; but for higher medical education and the progress of medicine, we *do* want more efficient teachers, and we wish to see them paid for the value of their brain-work, and not for their ability to make excerpts from the ancient chronicles of medicine.

In this connection it may be well to incorporate a word about medical journalism as well as medical professorship, and we are impelled thereto by the utterances of the *Bristol Medico-Chirurgical Journal* of December, 1893:

And our journals! Look at those piles on our tables! Of the thousands and thousands of papers in them how many are worth preserving? How many are worth reading? How many are worth only cursing? The dew of knowledge! Medical knowledge is no longer a dew, but a deluge—it drowns rather than nourishes. . . . . The path to high repute is much affected; it is easy and broad if it is not very straight. . . . We, his teachers and examiners, probably knew him as a gentle, plodding young man with a great capacity for note-taking; . . . he has started in pursuit of something called Research (spelt with a capital letter). He tells everything he sees in the new path, and he sees much that is wonderful. If such men could be made to hold their tongues until they had spent some years as hewers of wood and drawers of water in the workshops of our masters in research, the world might be richer; it certainly would be none the poorer.

Then there is the pushing practitioner. His pride is puffed up and his reputation is increased by a systematic publication of all his wonderful cases. As we know, wonderful cases are found in greatest numbers in the smallest practices. Our pushing practitioner has not long left the school; and he believes that science and art have stood still there since he left. An editor who would give to such men the answer that the old lady gave to her pushing grandson when he sought to explain to her the philosophy of sucking eggs, would be a gain to medical journalism.

EDITORIAL NOTES.

Lincoln on Marriage.—

In some respects Lincoln's memory suffers by reason of his having been the king of wit. There are those who think he never said anything serious. Yet he was one of the greatest philosophers, and his philosophy was always modestly put, but he was always so sincere in it that he was at times almost solemn.

On one occasion he was talking about marriage, a subject in which he always took the most profound interest. He said that every man who contemplated marriage should stand over a doctor with a club and make him tell the truth in reference to the chosen partner for life, if there were no other way of getting it out of him. And he went further. He declared that the parents who would allow a girl to marry a man without knowing as nearly as could be known his physical as well as his moral condition, deserved to be scalped. In his opinion the whole marrying business was wrong. He declared that fashionable girls too often were cursed with foolish mothers, who cared for nothing but to see their flesh and blood sold to the highest bidder.

How few men knew the depths of that master of men. What a loss to the world that he should have been taken away from it at the time when he was just being understood.—*Chicago Tribune* (*Medical and Surgical Reporter*).

The Administration of Anæsthetics.—

The following deductions were arrived at by the Commission appointed by the *Lancet* (London) to investigate the administration of chloroform and other anæsthetics:

The death-rate has heretofore been unduly high, and may be lowered by improved methods and greater care:

Ether is the safest anæsthetic in temperate climes for general surgery, when properly given from an inhaler permitting graduation of the strength of the vapor:

Nitrous oxide gas should be employed for minor surgery:

Chloroform is a comparatively safe body when given by a carefully trained person, but is not in any case wholly devoid of risk:

No age or nation is free from the perils of

anæsthesia; and no matter how slight the anæsthesia produced or to be produced, it demands the undivided attention of a duly qualified and trained physician.

Sulphur Dressings in Surgery.—

The use of sulphur dressings for some lesions of bones has been recommended by Doctor Arbuthnot Lane, of Guy's Hospital, London, in place of iodoform and other preparations which may induce dangerous if not fatal toxicity. Doctor Lane claims that sulphur is even a more powerful germicide than iodoform; that it acts by giving rise to certain products endowed with caustic properties, consequently its action should be carefully watched. Moreover its effect is temporary, and becomes more satisfactory when the sulphur is mixed with glycerin.

When large quantities of sulphur are employed, it is left in the wound for a few days, and when removed the parts are irrigated with a weak solution of sublimate.

Deaths Under Anæsthetics.—

Gurlt reported to the last Surgical Congress in Berlin the following statistics of deaths under anæsthesia, derived from observations of sixty-two operators: Chloroform, 94,123 narcoses, thirty-six deaths: Ether, 9,431 narcoses, no deaths: Ether and chloroform, 2,881 narcoses, one death: Ether and alcohol, 1,381 narcoses, no deaths: Bromoform with ethyl bromide, 2,151 narcoses, one death: Pental, 210 narcoses, one death. In 2,913 cases narcosis lasted over an hour; in an operation for utero-vaginal fistula, four and a-half hours; in a case of tetanus, nine hours. In twenty-five cases of death the post-mortem revealed cardiac disease. Gurlt urges careful examination of the heart before administering chloroform.

Medicine and Pharmacy.—

In a recent number of the *Journal of the American Medical Association*, J. M. Good discusses whether medicine and pharmacy shall continue to remain distinct professions or become amalgamated. He says:

If physicians convert their offices into dispensaries, and druggists, seeing their trade melt away, qualify as practitioners, and add consulting-rooms to their places of business, the dividing line will be obliterated in a generation. This is retrogression; it is opposed to the natural tendency toward the division and distribution of labor, and the segregation of all classes of workers into specialists.

Items and News.

Meat-Eaters.—

Many races of men live entirely on animal food, and these are the most hardy, and, from all I have been able to gather on the subject, the most free from diseases of all kinds. Sir Francis Head says:

"The Pampas Indians are all horsemen, or, rather, pass their lives on horseback. In spite of the climate, which is burning hot in summer and freezing in winter, these brave men, who have never yet been subdued, are entirely naked, and have not even a covering for their head. They have neither bread, fruit, nor vegetables, but subsist entirely on the flesh of their mares.

"After I had been riding three or four months, and had lived only on beef and water, I found myself in a condition which I can only describe by saying that I felt no exertion could kill me. Although often so completely exhausted I could not speak, yet a few hours' sleep always so completely restored me that for a week I could daily be upon my horse before sunrise, and ride till two or three hours after sunset; have really tired ten or twelve horses a day. This will explain the immense distances which people in South America ride, which I am confident could only be done on beef and water."

The Gauchos of the Argentine Republic live entirely on roast beef and salt, scarcely ever tasting farinaceous or other vegetable food, and their sole beverage is maté, or Paraguay tea, taken without sugar.—*Gentleman's Magazine.*

Modern Medical Journalism.—

Modern medical journalism has certain characteristics which are peculiar to our age and time. This is the age of the reporter, not of the scholar. The material of literature is news, not thought; gossip, not work. The chatter of the newsmonger pushes aside the matured thought of the man of letters. We are deluged with a shallow flood of literature, and we are so occupied in paddling about in its smooth and tepid pools that we scarcely care to try our strength in the rougher and colder waters of deep thinking.

This is also the age of advertisement. The desire of the writer is rather to be widely

read than to write well. The unavowed aim of the writer is the avowed aim of the journal —a wide circulation. And the purpose of this wideness of circulation is, not that knowledge may be diffused, but that advertisements may be caught—and money. Unknown men write to advertise themselves; known men are induced to write to advertise the journal. The chief end of journalism is to catch advertisements; the trail of the advertiser is over all.—*The Bristol Medico-Chirurgical Journal.*

A Plea for Cremation.—

Let cleansing fire haste well the change
Our mortal part must undergo,
Free vapors fit the air to range,
And leave the ashes pure below.

Why should corruption's ferment vile
With poison taint the kindly soil,
The earth's fair water-springs defile,
And air's salubrity despoil?

Why germs of pestilence we fear,
Be blindly treasured with our clay;
The foes, that slew the victims dear,
Be nursed to lurk for further prey?

Does not its tale of actions bad
Suffice for each departed soul,
Or must the lifeless body add
Another record to the roll?

Nor should affection's hope be strained
If heat resolve the outward man;
The fire is but a slave ordained
To work within the Master's plan.

Flame sped the martyrs blest on high;
It lent a chariot for the seer.
And surely Faith cannot deny
It may become a Christian bier.

—*J. F. Cobb, M.R.C.S., in British Medical Journal.*

Trichinæ.—

Trichinæ (*Trichina Spiralis*) are among the deadly enemies of man and of all pork-eaters. They are very minute and generally of a spiral nature, the female being but $\frac{1}{16}$ inch in length. The reproductive powers are enormous, 60 to 80 animals at a time being brought forth by eaeh female, and altogether about 1,500. They usually work their way from the intestines of a hog by boring, and so get to the muscles where they coil themselves up and grow; on becoming covered with a membrane, they remain passive unless the flesh is eaten by man or other animal. When passing through the intestines the shell becomes dissolved, and the young bore their way through to the muscles as described, and the horrible disease trichinosis is the result. Cooking is said to destroy the embryos, but that is very doubtful.—*Food and Sanitation.*

Novel Diarrhœa Cure.—

A gentleman in whose word we have the utmost confidence states he cured a most violent diarrhœa on himself at six different times by simply swallowing from four to eight small, smooth gravel-stones. He has also advised others to adopt the same measure and always with satisfactory results. He says the plan was originally adopted on the suggestion of an old German doctor, and as far as his own observation is concerned it is infallible in acute cases, and often beneficial in chronic cases. It is certainly a novel method, and the physiological effect would be hard to explain.—*Chicago Medical Times.*

Tuberculin Abandoned.—

At a recent meeting of a German medical society, in discussing a paper in which the writer advocated the use of tuberculin in cases of consumption, Ewald stated that both experimentally and clinically tuberculin had been proven to possess no specific action, and that its use had been discarded on account of the dangers associated with it. He referred, for proof of his statement, to Pfuhl's experiments.

Fees of Physicians.—

A Paris court holds, concerning the fees demanded by physicians, that not only the pecuniary condition of the patient is to be considered, but also the reputation which the physician may have acquired by his works and discoveries. The medical standing of the physician and the financial condition of the patient are two important factors in the eyes of the law.—*Medical Review.*

A Proper Christmas Gift.—

A young gentleman whose mother-in-law had dropsy, for which she had been repeatedly tapped, presented her this present: "A new silver trocar. To puncture the abdomen of Mamma. Merry Christmas. From Henri." —*Cincinnati Lancet-Clinic.*

The Congress of American Physicians and Surgeons.—

This organization meets in Washington, D. C., May 29th to June 1st, 1894. The Secretary is William H. Carmalt, M.D., of New Haven, Connecticut, who may be addressed for further information.

Reformers, the Clergy, and Charlatans.—

There is unfortunately a large portion of humanity who yet believe even what exposed charlatans like W. T. Stead says, and there

are hosts of clergymen who do not mind what laudatory testimonials they bestow on quack swindles.—*Food and Sanitation.*

American Medicine.—

The country which has given to us the *Index Medicus* and the *Index Catalogue* of its splendid library is not likely to fail in knowledge of the history of medicine.—*The Bristol Medico-Chirurgical Journal.*

Epilepsy and Bodily Weight.—

Many epileptics are subject to great variation in weight; one patient lost eighteen pounds in a day or two, and at another time gained forty-four pounds in twenty-seven days.—*Lyon Médical.*

Dislocated Liver.—

Such is reported by Buckholz, who reduced by gentle pressure, and held it in place with an elastic bandage. Some weeks after, the organ was in its normal position.

Diet of Childhood.—

Before the second year no vegetables should be given. Small quantities may be allowed later on, when they will be acceptable and readily digested.—*Jacobi.*

A Bright News Journalist.—

A Belgian newspaper, giving an account of a suicide, concludes with terms of emotion: "His death, which occurred immediately, was *definite and positive.*"

The Same Old Story.—

Just on the verge of danger, not before,
God and the doctor we adore;
But when the danger 's over and all is righted,
God is forgotten and the doctor 's slighted.

Doubtless!

There are said to be fifty thousand muscles in an elephant's trunk. It must have been packed by a woman.—*Tennessee Twinklings.*

Ipomœa Sinuata (New Morning Glory).—

A vine growing from seed that will cover a fence in no time, a rampant grower, and then it is a beautiful vine, with its huge leaves, dark prickly stems and immense rose-colored flowers from three to four inches across, and costs only twenty cents per packet. Every one interested in climbers or new and good things for the garden should send ten cents to James Vick's Sons, Rochester, N. Y., for Vick's Floral Guide, 1894, which is a perfect beauty in its gold cover. As the ten cents may be deducted from first order, it really costs nothing.

Book Reviews.

SIR FRANCIS BACON'S CIPHER STORY. By Orville W. Owen. M.D. Cloth; 8vo; pp. 200. Howard Publishing Co., Detroit.

It is certainly unfortunate that Ignatius Donnelly should have published a volume claiming the discovery of a cipher announcing Sir Francis Bacon as author of the Shakespearian collection, as, ever since, the reading public have been inclined to look with suspicion upon anything relating to such topic. One cannot open Doctor Owen's book, however, without discovering that the similarity rests with the title alone, and that the two authors have proceeded on widely different lines. Donnelly's volume has no basis save in wild theory, while that of Owen is derived from definite data. Indeed, the latter volume represents the most marvelous discovery of the age.

Orville W. Owen, M. D.

Even supposing that the claim made that Sir Francis Bacon is the author of Shakespeare is not strictly true, the fact remains that a most marvelous consecutive narrative has been evolved from various volumes, only a portion of which are claimed for the "Bard of Avon," and that, *per se*, give evidence of being the work of one pen. The book is convincing evidence in itself that either Sir Francis Bacon *did* write the so-called works of Shakespeare, or that Doctor Owen has discovered a coincidence even more wonderful than the works themselves. The only remaining option available to the reader is that Doctor Owen himself must have concocted the work, and if this be true he still must be accredited with the most wonderful literary production of the century.

A great deal of unjust and ignorant criticism has followed in the train of the publication of the "Cipher Story," for there are Shakespeare "cranks" as well as other one-idea individuals. So far, however, the arguments offered do not tend in any way to invalidate the claims of Doctor Owen; and no thinking person, familiar with the period in which Shakespeare lived, with the history of the individual himself, with his associations and surroundings, can for a moment believe that he was the author of the plays that bear his name, since these give evidence of a knowledge of higher science and philosophy which in some respects is not transcended in our own day. That the possessor of such knowledge must necessarily have been a member of that great scientific and philosophic organization known as the Rosicrucians, is evident; and we now know that Sir Francis Bacon was one of the last and ablest of this great society. Even doubters, if they will permit themselves to peruse Doctor Owen's work, must admire it, whatever construction they may place upon his theory of a cipher.

LITTELL'S LIVING AGE. Price, $8.00 per year. Littell & Co., Boston.

This periodical fully justifies its title in that it is a transcript of the best current British literature of the day, and one who peruses it cannot fail to discover that it embodies the best thought and writing of the times. The current number fully sustains the previous high reputation, and embodies papers which the cultured reader can ill afford to lose.

Fiction is principally represented by capital translations, made expressly for this magazine, from noted French and German authors. Of the two serials now running, while both are excellent, the more powerful is the one entitled "Manette Andrey, or Life during the Reign of Terror," by Paul Perret, the brilliant and versatile Parisian novelist.

The fifty-two weekly issues of the *Living Age* give what cannot be otherwise obtained except at great outlay of time and labor and several times their subscription price in money.

BUILD WELL. By C. A. Greene, M. D. Cloth; 12mo; pp. 350. Price, $1.50. Boston: D. Lothrop & Co.

When we pause to reflect on the opportunities afforded by medical practice to gauge the immensity of the social evil and its appalling, far-reaching consequences, it may well be queried: Are physicians doing their share in the inculcation of those precepts, physical and moral, which tend to do away with the scarlet woman, or the other equal horrors of illicit indulgence?

Mindful of the duty which here devolves on the profession, Doctor Greene has brought to bear on the questions of proper marriage and parentage, all the resources of a long and varied experience, of a clear, telling style, and of an enthusiasm which kindles at the hope of benefit to young and unborn generations.

Though designed for the general reader, the book conveys a distinct, if not novel, message to the medical profession.

At all events, in view of the distress and misery wrought by the prevailing ignorance of sexual hygiene, Doctor Greene's exposition of its essentials will prove not less fruitful than the lucid and impressive style with which the vast importance of personal purity is presented.

THE DELINEATOR. Price, 15 cents; $1.00 per year. The Butterick Publishing Co. (Limited), New York.

In the February issue the fashions displayed are handsome and becoming, and ladies who have not completed their winter wardrobe cannot do better than follow the styles for this month. St. Valentine is responsible for two novel diversions, one being a "Valentine Tea" and the other "True Love Card Party," while a third entertainment is "A Poverty or Hard Times Party." An article appropriate to the times is on "Table and Bed Linen." In "Household Renovation" are practical and valuable instructions in upholstering. The articles on "Dress Fabrics," "Trimmings," and "Millinery" are invaluable; that on "Fur Rugs and Wraps" gives the latest information regarding these luxuries.

THE DISEASES OF PERSONALITY. By Th. Ribot. Paper; 16mo; pp. 160. Price, 25 cents. The Open Court Publishing Co., Chicago.

This is volume 1, number 4, of the Religion of Science Library. Space will not permit of a suitable review; it can only be said that this is one of the best of Ribot's works, and one moreover that should be in the library of every physician who is at all interested in psychology and the study of nervous diseases. Though intended for the lay reader, in its scope it touches many points that are decidedly medical in character.

We regret to observe a number of typographical errors.

OUTING. Price, 25 cents; $3.00 per year, Outing Co., Limited, New York.

The February number contains: "Invisible Chains," by Louise D. Mitchell; "Canoeing in Honduras," by E. W. Perry; "The Price of a Name," by B. H. Harrison; "Hunting in Polar Regions," by J. M. Mills; "In the Land of Josephine," by Walter L. Beasley; "Jamaica for Cyclists," by Alan Eric; "Alaskan Boats," by Lieutenant J. C. Cantwell; "A Day's Sport in the Caroline Islands," by S. H. Watts; "Trawling with Gloucester Fishermen," by John Z. Rogers. Also a continuation of "Lenz's World's Tour Awheel," and a history of the "National Guard of Pennsylvania," by Captain C. A. Booth, U. S. A. A special paper by L. H. Smith is entitled "A Sportsman's Taxidermy." There are the usual editorials, poems, records, etc.

THREE LECTURES ON THE SCIENCE OF LANGUAGE. By F. Max Muller. Paper; 16mo; pp. 112. Price, 25 cents. The Open Court Publishing Co., Chicago.

These lectures, which originally appeared as separate publications in *The Open Court*, are for the first time collected in one volume. The name of the author is sufficient evidence of the thorough treatment, for there is perhaps no one man in the universe so well calculated to deal with a subject so little understood; consequently from title page to finis this little volume is of absorbing interest.

OUR ANIMAL FRIENDS. The American Society for the Prevention of Cruelty to Animals, New York.

This publication is doing good work in exciting sympathy for and interest in the brute creation, but has lately assumed an unfortunate phase in organizing a crusade against vivisectionists. The January number gives a report of the work done and encourages its readers to believe that the evil of cruelty to animals is being to a considerable degree overcome.

A SYSTEM OF LEGAL MEDICINE.—E. B. Treat, of New York, announces for early publication a System of Legal Medicine that shall be a complete work of reference for medical and legal practitioners, edited by Allan McLane Hamilton, M.D., and Lawrence Godkin, Esq., of the New York bar, aided by thirty collaborators of recognized ability. It will be published in two royal octavo volumes of 700 pages each, and will be fully illustrated.

The great need of an American work on medical jurisprudence has long been felt; and the enterprise gives abundant promise of being exactly what the medical and legal professions have so long desired. It is pledged every department will be thoroughly and reliably treated.

A TORTURE.—To one who loves the soil and has a garden 40x60 and more than half shaded by adjoining buildings, the receipt of such a sumptuous work as Vick's Floral Guide for 1894 is a torture. Think of it: 32 pages of novelties and specialties printed in 8 different colors, elegant lithographs of crysanthemums, branching aster, double anemone, variegated hop, poppies, and vegetables; 112 pages crammed full of honest descriptions and illustrations of the grand old vegetables and flowers. Well, you who have a place to plant such things had by all means better send 10 cents to James Vick's Sons, Rochester, N. Y., for the Floral Guide, and you may deduct this amount from first order.

Therapeutic Brevities.

Therapeutics of Coca.—Coca is not as much employed as its merits would lead one to suppose. Extensive experimentation has led me to conclude that if it were studied more generally, physicians would soon realize that they have at their command a remedy as potent as any in the materia medica, and if it were freed from its relationship to the empiricism that surrounds it, the profession would take more kindly to it.

From accounts given of its action in the hands of others, and from personal experience, I am satisfied that it is indeed a valuable remedy, particularly in the following: As a restorative in convalescence: In gastric and intestinal troubles: In affections of the nervous system (neurasthenia, hysteria, melancholia, depression of spirits, nervous exhaustion).

It is a stimulant to the respiratory, circulatory, and nervous systems, and by its action on these assists digestion and promotes nutrition. Whether it acts directly as a nutriment and aliment to be given in convalescence is a question yet to be decided, and while some authorities class it among foods, it is indeed doubtful whether this is in accord with the views entertained by the majority of investigators. I am inclined to the opinion that it would be nearer in accordance with the facts if we were to consider it more as a stimulant which, by increasing the action of the different systems, promotes restoration to normal condition. Whatever the facts may be, we must, however, admit that the stimulating properties of the drug make it a tonic especially indicated in enfeebled states from any cause, and particularly in convalescence from fevers and in the treatment of anæmia and debility when due to derangement of the digestive apparatus. When administered in atonic disorders of the digestive system, it has been noticed that the muscular fibres of the stomach and bowels take on increased functional activity and that the peristaltic action of the

intestines is increased. It also has a soothing effect on the mucous membrane of the stomach. These two effects of the remedy would indicate its usefulness in indigestion where there is so much distress after ingestion. The increased tone of these organs and the allaying of distress has a wonderfully pleasing effect on the sufferer from dyspepsia.

The wonderful effect of Coca on the nervous system has long been recognized. That the intellectual faculties are augmented by it is well known; also that it exalts the functional activity of muscles; and when given in large doses arrests the transmission of painful and distressing sensations. This makes it one of our most valuable remedies, and readily suggests its use in those disturbances of the nervous system above enumerated. We may smile at the complaints of the hysteric and the melancholy of the hypochondriac, or the depression of spirits and the feeling of nervous lassitude of others, as being the results of *malade imaginaire;* but trace them to any cause we may, we will find a systemic demand for a drug that will stimulate and arouse the various organs to an increased action and that will at the same time prevent the transmission of these various sensations of pain, physical and mental distress, and the uncomfortable sensations arising from a disturbance of the mind and digestive system. For this purpose no better remedy can be suggested than Coca.—*Doctor Harighorst, in Toledo Medical Compend.*

Iodide of Potash in Headache.—The *Anales del Circulo Medico Argentino* recommends Potassium Iodide in small and frequently repeated doses as an efficacious remedy in headache. It is said that two grains in an ounce of water, given every quarter-hour, will relieve completely, in a short space of time, frontal headache accompanied by sensations of heat and chilliness, languor, general malaise, repugnance to food, and nausea, since these headaches are for the most part due to definite or special causes—may be regarded as sympathetic with slight syphilitic element, which is either hereditary or acquired. The Potassium Iodide thus administered often exercises marvelous action.

Management of Neurasthenia.—In the constipation which is so troublesome in these cases, *La Monde Médicale* recommends a pill composed of cascara, aloes, and myrrh; for the flatulence and anorexia, a mixture of nux vomica, cascara, cardamom and gentian gives good results. Against the anorexia, a pill composed of arsenic, aloes and nux vomica may be ordered, and in connection therewith may be administered the succinate of iron. As a palliative to produce sleep and equalize the circulation, sodium bromide is very useful. Kola is also indicated in the anorexia, dyspepsia, and nervous phenomena.

Normal Liquid Belladonna in the Treatment of Mouth Affections.—Professor H. Kobner, of Berlin, recommends Belladonna for such affections of the mouth as leucoplakia, mercurial stomatitis, syphilitic ulcerations, mucous patches, etc. The theory upon which the remedy is accepted is its antisialagogue properties, and it should be employed in conjunction with cauterization. He remarks it is advisable in many cases to continue the administration of the remedy for some time in full doses, and that under its influence ptyalism, and pain on mastication and deglutition, rapidly disappear.

Treatment of Acne.—Doctor Schwimmer, Professor of Dermatology in the Medical Faculty of Buda-Pesth, recommends covering half the face alternately every night with a thin layer of:

℞ Sublimed sulphur, Powdered starch, } ää 2½ drachms.
Soft soap, 5 drachms.
Lard, 2 ounces.

This ointment is left on about two hours at a time, after which the face is washed with warm water and dusted with rice powder or starch.

Assafœtida and Abortion.—Doctor Guido Turazza, of Padua, who, moreover, is corroborated by numerous Italian physicians, asserts the efficacy of Assafœtida as a preventive of abortion and in the nervous deangement of women, and that it possesses the additional advantage of regulating the bowels. Doctor Turazza recommends a pill, containing a grain and a half, to be given once in two days at first, then with gradually increasing intervals until only one is given every tenth day.—*Woman's Medical Journal.*

Ipecac as a Hæmostatic.—From India comes a report that ipecac in dose of twenty grains, taken as a bolus before food, and if practicable early in the morning, is superior to all other hæmostatics. It is especially available in hæmorrhage from bleeding surfaces, epistaxis, hæmoptysis, and the various uterine fluxes. If the recumbent position is enforced, it is claimed no remedy is necessary to avert emesis.

Nitro-glycerin for Vomiting.—Humphries employed Nitro-glycerin systematically for three years in all forms of vomiting, with highly satisfactory results. In cases of gastric catarrh in the adult or in the infant, acute or chronic, dependent upon alcoholism or upon anæmia, it acted almost as a specific; it also proved useful during pregnancy. In peritonitis alone it increased the vomiting, but the effect soon passed off. It proved of little value in the relief of the vomiting of pulmonary tuberculosis.—*British Medical Journal.*

Permanganate of Potassium in Diphtheria.—Bowman reports several cases of diphtheria in which most excellent results were obtained by the use of a solution of Permanganate of Potash three grains to the ounce. Three or four applications an hour were made directly to the membrane with a large camel-hair brush, for eight or twelve hours; after this, once every two to six hours is sufficient. In some cases a spray is a better method of application.—*Boston Medical and Surgical Journal.*

Therapeutics of Cactus Grandiflorus.—In irregular heart action from any cause except increasing tonicity, and in weakness of heart's action with irregularity or intermittency due to nervous causes, *Cactus Grandiflorus* acts charmingly. It will likewise produce sedation in fevers where the pulse is rapid from prostration.—*Medical Summary.*

Therapeutics of Henbane.—Five to ten drops Normal Liquid Hyoscyamus is an excellent remedy in case of seminal loss due to irritation or lack of muscular tone. As these emissions usually occur at night, the drug should be administered at bedtime.—*Record.*

Irritable Bladder.—Normal Liquid Gelsemium will often more quickly relieve than any other remedy. It is especially adapted to women of hysterical type troubled with irritation of the neck of the viscus demanding constant urination.—*Medical Brief.*

Camphoric Acid in Night Sweats.—Doctor Howard (of Baltimore) finds ten to twenty grains of Camphoric Acid, given at night, controls night sweats, when atropia, sulphuric acid, etc., fail.—*Kansas City Medical Record.*

Asclepias.—For inflammatory chest trouble, with dry hot skin, or where there is pain in the thorax, localized, sharp, acute or subacute, with increased inspiration, *Asclepias tuberosa* often acts like magic.

Medical Progress.

RELATIONSHIP BETWEEN THE MENTAL AND PHYSICAL IN DISEASE.—Strange as it may seem, the coccygeal joint is very liable to play the barometer to any kind of mental worry. The serious surgical blunder is, therefore, not infrequently made of extirpating for sheer hysterical coccygodynia this important bone—important from its muscular origins and insertions. I have known coccygodynia to attack a lady after the death of her mother. Every kind of treatment failed, but it was finally abruptly cured by her great resentment at the second marriage of her father.

The late Doctor Fordyce Barker told me of an analogous case caused by the sudden death of the gentleman to whom the lady was engaged. After consulting without benefit the best specialists at home and abroad, she led a sofa-ridden life, and did not stir from her house. She obstinately objected to surgical intervention, and the case seemed a hopeless one, but she was permanently cured by a law-suit following a bitter family quarrel, in which she took a very active part.

I have not on my conscience the extirpation of a nervous coccyx, but this exemption is merely a piece of good luck and not of good sense, as the following history will show: A highly intellectual lady, among many nervous symptoms suffered much from her coccyx. This she attributed to injuries sustained while she was riding a bucking horse. She was the patient of an eminent neurologist, who had cured her of all her symptoms but the coccygeal one. I was called in by him, and, after doing my best by topical applications and by replacing a retroverted womb and dislocated ovaries, made up my mind that the trouble was traumatic, needing surgical relief. The day and the hour of the operation accordingly were fixed upon, but, before they were reached, the pain mysteriously left, never to return. A dominant mental impression—the fear of the operation—exorcised the coccygeal demon.

Once I was asked by a medical friend to see an exceedingly bad and acute case of pruritus vulvæ—the very worst that ever came under my observation. The lady was tossing about in her bed in a state bordering on frenzy from the intense itching, which could be allayed only by cold starch poultices applied every few minutes. Very naturally attributing it to uterine disease, my friend had discovered a small but angry-looking

tear in the cervix, exuding a viscous discharge, and I was called in to the case to decide the question of an operation. I, too, was at first led astray; but the suddenness of the seizure, its vehemence, and the lack of consistency in the behavior of the symptoms, put me on my guard, and we soon found out the cause to be an attack of jealousy. This was a stubborn case to manage, but she ultimately recovered under isolation, massage, and heroic doses of assafœtida.

Twice I treated a highly intellectual lady for attacks of pruritus vulvæ and of vaginismus. The itching was intolerable, and the sensitiveness of the genitalia so acute as to forbid every attempt at sexual intercourse. Each attack was brought on by mental overstrain, from exacting literary work, and much domestic unhappiness ensued.

Several cases I have personally known of ladies who had for months been treated for supposed uterine or ovarian disease, when their whole and only trouble was remorse at having had illicit intercourse or at having resorted to criminal abortion. I could spin out to an interminable length this list of cases illustrating the close and often very perplexing kinship between the brain and the reproductive organs, but time and space forbid, and these will suffice amply for my purpose.

So misleading, indeed, are the symptoms of a jaded brain or of other nerve-strain, under the uterine guise in which they often masquerade, that when a jilted girl, a bereaved mother, or a grieving wife consults a physician, he, unless on his guard, will be more likely to minister to a womb diseased than to a mind diseased. Such cases, even when associated with actual uterine disease, are not bettered by a merely local treatment. Nor are medicines by themselves of much avail. What they need are the incantations of the rest cure, viz., massage, electricity, and strict seclusion. Hope should be infused into every case, and above all there should be imported into it the personality of the physician. The riper my experience, the more am I convinced that, in the treatment of woman's diseases, the possibility of a nerve origin or of a nerve complication should be the *fore*-thought and not the *hind*-thought of the physician. — *University Medical Magazine.*

Chronic Nephritis without Albuminuria.—That the mere presence or absence of albumen, and the detection of or failure to detect the presence of tube-casts in urine, are not safe guides in the diagnosis and prognosis of chronic disease of the kidney, degenerative or inflammatory, would seem demonstrated by the results of a careful study by D. D. Stewart, of Philadelphia, as published in the *American Journal of the Medical Sciences* for December last. He records a group of illustrative cases in which the presence of albumen could not, as a rule, be demonstrated, while tube-casts were only occasionally found. The symptoms to be looked for in cases of this kind are: Rather heightened arterial tension, with accentuation of the second sound of the heart, and a tendency to cardiac enlargement, diminished secretion of urine and deficient elimination of nitrogen, headache, vertigo, breathlessness, impaired vision, and retinal changes.

In any case in which insidious changes in the kidneys are suspected and the presence of albumen and tube-casts is not demonstrable by ordinary methods, repeated examinations of the total twenty-four hours' urine should be made; the search for casts may be facilitated by centrifugation. Attention should also be directed to the quantity of urine excreted and the amounts of solids contained, particularly of urea and uric acid. The value of these observations resides in the fact that early recognition of the condition is essential to the attainment of the best therapeutic results.

Antitoxic Function of the Liver.—Those acquainted with the views propounded by Professor Bouchard will be conversant with his ideas concerning the poison-destroying properties of the liver; he and his followers attach great importance to the power of the liver-cells to nullify the effects of the toxines manufactured in the intestines. The correctness of this is apparently corroborated by Schiff, Heger, Roger, and others, who found that alkaloids injected into the branches of the portal vein were much less toxic than when introduced into the general venous circulation. M. Pavlow, by means of a ligature placed on the portal vein, found the blood was compelled to deviate from the liver and pass directly into the general circulation, when poisonous symptoms appeared—fever and nephritis with albuminuria. That this nephritis is not due to hypertension of the blood in the renal vessels was evidenced by the fact that no such kidney trouble is caused by ligature of the inferior vena cava, although this manœuvre is productive of a greater tension in the renal vessels than the operation in question. A wound artificially produced in an animal whose portal vein has been tied heals very slowly, whereas a similar wound in an animal where the inferior vena cava has been ligated cicatrizes without difficulty.

The conclusion is that, if the blood is prevented from passing through the liver, toxæmia occurs, due to the fact that the liver no longer plays a protective rôle against toxines, which are being continually fabricated in the intestinal canal.—*The Lancet* (London).

INTERSTITIAL NEPHRITIS.—If the kidneys are overtaxed by a highly nitrogenous diet as a man passes forty, they begin to tire and contract, and we have interstitial nephritis. Of these cases, usually people who eat meat three times a day, nine-tenths have an enlarged left ventricle. But before we find any evidence of enlargement of the heart, there will be discovered a very sharp accentuation of the second sound, and the radial pulse will be very hard, tense, and full.

If a patient beyond forty years of age rises at night to pass urine more than once, or even once habitually, and there is nothing to account for it in the way of irritable bladder, stricture, or cystitis, it is one of the most constant symptoms of interstitial nephritis, although it is not always present. Take the twenty-four hours' quantity to obtain the specific gravity. Place the patient upon an ordinary mixed diet, and if the specific gravity of the urine is 1.010 to 1.014 go further and examine for urea. If is found, instead of ten grains of urea to the ounce, seven, eight, or six, the disease is advanced, and we have something tangible to show that the kidneys are incompetent; we have interstitial nephritis in such cases whether there is albuminuria or not. It is very difficult to find hyaline casts by ordinary methods in interstitial nephritis, but if the urine is concentrated they may be found.—*Sheffield Medical Journal.*

VACCINATION WITH GOAT-LYMPH.—Doctor Westwood Wilson, Surgeon-in-Chief to the Pioneer Forces in South Africa, says:

Smallpox having broken out in the Portuguese camp, three miles from ours, I prepared some goat-lymph and vaccinated all our men. The result was very successful in all but eleven cases; these I re-vaccinated, and only one of the number failed to react satisfactorily.

I also gave the Portuguese surgeon some of my lymph, which he used freely, reporting the same happy result. He informed me few of his men became infected with smallpox after they had been vaccinated with the goat-lymph, and these few had the disease only in a very mild form, and all recovered.

My experience is that the lymph of the goat is superior to that of the calf. I have never had a case in which it caused any bad effect, and we all know that in using calf-lymph patients are liable to be inoculated with tuberculosis, which is very common in the calf but very rare in the goat.

The effects following vaccination with goat-lymph are similar to those which follow the use of the calf vaccine: On the third day, papulæ; on the fifth, vesicle; on the seventh, the vesicles distended with lymph; on the ninth, areola fading; on the twelfth, dark crust formed; on the eighteenth day, crust comes away.

SUDDEN BLINDNESS IN YOUNG DIABETICS.—Professor Litten remarks: "There is no affection in which disturbances of sight are so frequently met with as in diabetes. All the ocular tissues—cornea, iris, crystalline lens, vitreous humor, retina, muscles, etc.—may be affected, but changes in the crystalline lens are most common.

"The causes of diabetic cataract are little known, though Seegen attributes it to the presence of exaggerated glycosuria and diabetic cachexia; and it is always bilateral; this explanation, however, holds good only in young patients under twenty years of age, seeing that in old diabetics cataract is often unilateral and may be associated with but moderate glycosuria."

In two cases under Professor Litten's observation, cataract developed with amazing rapidity, the evolution being complete in the space of a few hours.—One was in a girl aged seventeen, in a cachectic condition, excreting about twelve ounces of sugar in the twenty-four hours. There was complete loss of sight on the right and imperfect vision on the left side, and she was operated upon with considerable relief, the lens being dislocated into the anterior chamber, where it was rapidly absorbed. The second case was identical with the first, but no operation was performed and the patient became absolutely blind.

DEATH AS IT IS.—Perhaps the most common mistake of the lay mind is the association of the dramatic with the conception of death. Nothing is more common than to hear from the pulpit, pictures in words of excitement, of alarm, of terror, of the death-beds of those who have not lived religious lives; yet, as a rule, if these pictures are supposed to be those of the unfortunates at the moment of death, they are utterly false. In point of fact, ninety-nine of every hundred human beings are unconscious for several

hours before death comes to them; all the majesty of intellect, the tender beauty of thought or sympathy or charity, the very love for those for whom love has filled all waking thoughts, disappear. As a little baby just born into the world is but a little animal, so the sage, the philosopher, the hero, the statesman, he whose thoughts or deeds have writ themselves large in the history of the world, become but dying animals at the last. A merciful unconsciousness sets in, as the mysterious force we call life slowly takes leave of its last citadel, the heart, and what is has become what was. This is death!—*Cyrus Edson, in North American Review.*

THE LYMPHATICS OF THE ANUS.—The lymphatics of the anus in children empty into the glands near the termination of the long saphenous vein, most often somewhat above that level, but not rarely below it; these lymphatics are connected with those of the rectum along the columns of Morgagni. The lymphatics of these parts may be divided into three sets: Those of the anus already mentioned inferior to the *levator ani;* those just above that muscle running to the lateral glands in the neighborhood of the internal iliac or of its chief branches; and finally, superior ones running to the glands along the superior hæmorrhoidal artery. It is unfortunate opportunity has not been offered for study of the rectal lymphatics in adults, as it is desirable to ascertain whether they empty only into the glands of the meso-rectum, or whether they have connection with the glands at the side of the pelvis.—*Doctor Quenu, in Journal de l'Anatomie et de la Physiologie.*

HISTORY OF FOUR WOMEN WHO REFUSED OÖPHORECTOMY.—In each case the removal of the uterine appendages was insisted upon by gynæcologists, and refused. The time that has elapsed since the refusal of operation varies from eighteen months to twelve years, and all the women are now in excellent physical health and happy; two of them have since borne children. They are the only women I have ever known to be advised the operation and refuse it. In a practice of average size for twelve years I have had occasion to recommend the removal of the appendages once, excepting cases of ovarian tumors. Several of my patients have drifted into other hands and had oöphorectomy performed, and, as far as I can learn, have been disappointed in the results each time. The best men in this special line of work are doing this operation less and less each year. Their place is being amply filled by lesser lights, with smaller numbers of individual cases, but with a yearly aggregate that is terrible to contemplate.—*Atlanta Medical and Surgical Journal.*

TO FIND THE UPPER EXTREMITIES OF THE DIVIDED TENDONS OF FINGERS.—Doctor Félizet's method of procedure is based on the anatomical disposition of the fine fibrous bands which bind the tendons together. For example, to find the upper extremity of the flexor tendon of the middle finger, the other fingers (or at the least the ring finger) should be fully extended, when the cut end of the tendon is made to emerge, being dragged upon the fibrous bands which bind it to the other tendons. The same principle can be applied in suturing a divided tendon. The neighboring fingers, the tendons of which are still entire, being fully extended, the cut extremities of the injured tendon approach each other, and the suture is rendered more secure by being stitched to one of the adjoining tendons before the divided extremities are united.—*La Semaine Médicale.*

FIBROID GROWTHS IN NEGROES.—Doctor E. A. Balloch says three diseases are characteristically frequent in the dark-skinned races, viz., Elephantiasis Arabum, keloid, and uterine myomata; and that in general terms these are essentially characteristic of an increasing development of fibrous tissue due to proliferation of the cells around the capillaries, these being increased in number and size. In respect to malignant growths the same connective-tissue type predominates, and he lays it down as a pathological law that there is a peculiarity in the dark-skinned races rendering them liable to growths of a fibrous nature in a degree greatly exceeding that observed in the white race.—*Medical News.*

CAFFEARINE.—A new alkaloid has been isolated from coffee by Doctor P. Palladine. The alkaloid itself can be obtained from the hydrochlorate by the use of silver oxide, and is obtainable in crystalline needles, which are acted upon by light and are quite soluble in water and alcohol. The hydrochlorate forms needles extremely soluble in water, also soluble in dilute alcohol, but insoluble in absolute alcohol. Caffearine differs from caffeine by being precipitable by alkaloidal reagents.—*American Journal of Pharmacy.*

Publisher's Department.

On the 14th of February the man who lacks the courage necessary to inspire an anonymous letter gathers his forces and sends a comic valentine.—*Washington Star.*

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Dios Chemical Co., St. Louis, Mo.:

GENTLEMEN:—I have used your antiseptic preparation, called "Sennine," with very good results.

Respectfully,
ROGER WILLIAMS, M.D.,
Pittsburgh, Pa.

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A UNIVERSAL CRY.

Oh, wad some power
The giftie gie us
To see our creditors
Before they see *us*.
—*Detroit Free Press.*

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CHICAGO, ILL., Feb. 8, 1894.

Yale Chemical Company, Chicago, Ill.:

GENTLEMEN:—It gives me much pleasure to send you the following favorable clinical report:

Mrs. P——, American, age 67 years; widow; mother of two sons and one daughter. I saw this case first Jan. 5th. A variety of symptoms affecting all the organs, organic heart trouble, and extreme anæmia. This attack commenced with coryza, the inflammation extending to the frontal, maxillary sinuses and Eustachian tubes.

Marked general symptoms, viz.: headache, chills, lassitude, anorexia, and debility. Temperature, 104°. Considerable prostration, with considerable disturbance of digestive organs. The most marked disturbance in the cerebral functions, slight delirium. Eyes sensitive to light. Nausea and dizziness when in upright position. Slight œdema of the lower limbs. Urine scanty and high-colored. Considerable bronchial inflammation and sore throat.

Diagnosis: Severe attack of influenza, with numerous complications.

Treatment:

℞ Ammon. carb., ʒ j.
Kali chlor., ʒ ss.
Tr. ferri mur., ʒ j.
Syr. limonis, q. s. ad ℥ iv.

M. Sig.: One drachm in a half-wineglass of water every two hours.

Alternated with:

℞ Gurania, ʒ iss.
Ext. digital. fl., ʒ ss.
Spts. vini rect., ʒ j.
Syr. simplex, q. s. ad ℥ ij.

M. Sig.: One drachm every hour.

Before prescribing I exhibited one drachm of Gurania in 20-grain doses, in five hours, with the result of relieving the pain and lassitude, and reduction of temperature. There was no cyanosis, heart symptoms or noticeable unpleasant after-effects.

Gurania I believe to be a more powerful antipyretic than coal-tar productions, and since I have used it I have had no trouble in controlling the nervous symptoms. I have great confidence in Gurania and will give it further trial.

Sincerely yours,
G. VAN ZANDT, M.D.

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When angry, count a hundred; when very angry, swear.

When I reflect upon the number of disagreeable people who I know have gone to a better world, I am moved to lead a different life.

Behold, the fool saith, "Put not all thine eggs in the one basket," which is but a manner of saying, "Scatter your money and your attention;" but the wise man saith: Put all thine eggs in the one basket and—*watch that basket.*

July 4th: Statistics show that we lose more fools on this day than in all the other days of the year put together. This proves, by the number left in stock, that one Fourth of July per year is inadequate, the country has grown so.—*Pudd'nhead Wilson's Calendar for 1894.*

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The combination called "Fernine Tablets" has been in my practice for the last year, and the entire profession is under obligations to the Phenique Chemical Co. for getting up the formula in so elegant a form. I have never failed to obtain prompt relief, and in many cases have achieved a permanent cure by its use in obstinate cases of chronic metritis or subinvolution.

The effect upon the discharges of mucus and muco-pus in leucorrhœa is simply wonderful.

For the first time, the active principle of *Polypodium vulgare*, known by its English name as "female fern," is used here in the treatment of dysmenorrhœa. This is an entirely new feature of the preparation. The effect of the other ingredients on disturbed action of the mucous membranes lining the female genital tract, is well established by long and successful application. I find that it is best to give the tablets after meals, and also one at bed-time.

A valuable adjuvant in the treatment of these cases is the careful attention to proper action of the bowels, which may call for an occasional saline cathartic.—*R. M. Kerley, M.D., Superintendent Female Hospital, St. Louis.*

THOUGHTLESS OR UNKIND.

"Here," said the very young man, "is a chameleon."

"Oh, Mr. Callow," she exclaimed, "this is very kind of you. I shall take good care of it."

"I hope you will keep it to remind you of me."

"I shall take the greatest pleasure in doing so." And after a pause she added: "What a pity it doesn't stay green all the time."—*Washington Star.*

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Treatment of Gonorrhœa.—I. Humphrey, M.D., Fairbury, Neb., says: The cure of gonorrhœa in some cases is no trifling matter, as I long ago learned, not from books, but from experience. Any preparation of mercury, sulphate of zinc, nitrate of silver, acetate of lead, or, in fact, any and all astringents too strong, given in the early stage of gonorrhœa, will be very likely to result in stricture or orchitis. It is far better to do nothing than to use such remedies, especially in the early stage. Never use any medicine the first two to four days after the discharge appears. Use only warm water frequently injected with a P. P. vulcanized syringe (use no glass syringe). Use the injection immediately after urinating, so as to avoid carrying the virus further up the canal. Give at the commencement a laxative of any bland cathartic, if necessary, to keep the bowels loose. After three or four days' use of warm water, use instead:

℞ White Pinus Canadensis (Kennedy's), 1 ounce.
Morphia sulph., 15 grains.
Aqua font., 5 ounces.

M. Sig.: After passing urine to wash out the canal, inject a full P. P. syringe of the medicine, holding it in the penis three to four minutes. Use three times a day.

If more than one bottle is required, fill the bottle each time after the first is gone, just the same, only use two ounces of the Pinus Canadensis; order plenty of nourishment, no intoxicating drinks, avoiding all excesses, and you will have no cases of orchitis or stricture, and last but not least, make no failures, nor will even need to blister the penis.

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Dr. Domanski, in *Therapeutische Monatshefte*, November, 1893, No. 11, says: In recent cases of "rheumatic" neuralgia (particularly in the region of the sciatic nerve and also in that of the trigeminus and others) and in muscular rheumatism of short duration, especially if of acute development, I prescribe with very satisfactory and often surprising results phenacetin with salol and caffeine (10 per cent. of the quantity of phenacetin) for adults, according to the following formula:

Phenacetin (Bayer), } ää 2.50–4.00
Saloli, }
Caffein. puri, 0.25–0.40

M. f. p. in dos. æq. x. div. S.: From two to four powders daily.

With this mode of administration I have never perceived any unpleasant by-effects, either of phenacetin or of salol, and in almost every instance I could dispense with injections of morphine, a fact of great importance in country practice.

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THE BOON OF POVERTY.

Tramp: Won't you give me a dime, please, to get me something to eat?

Citizen: Wouldn't you rather have a quarter?

Tramp: Thanks, no; I'm afraid of the income tax.—*Detroit Free Press.*

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I have used Peacock's Bromides in four cases of epilepsy, and it is only fair for me to state that I have had good results in each case. In three of these cases there were no attacks at all while the medicine was used, although they had been frequent and severe in spite of the exhibition of the ordinary bromide salts. I say while it was used, because I have had difficulty in convincing some patients that they were not entirely cured after using one bottle, but where I have been able to have them continue the treatment for a reasonable time after the disappearance of the fits, there has been no return of them even after the medicine was stopped. —*Chas. C. Johnson, M.D., Columbia, S. C.*

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Cactina, the active principle of the *Cactus grandiflorus*, has been lately used with much success as a cardiac tonic. It has been found especially valuable in cases of functional disorders of the heart, and produces good results in cardiac dilatation, with anasarca, with or without valvular disease, when digitalis and other drugs have failed. It has no tendency to produce gastric disturbance, and in this respect it has a decided advantage over digitalis. The drug has been put up as Cactina Pillets by the Sultan Drug Co., of St. Louis, and their agents in this country have sent us a sample to test their efficacy. The production is decidedly a pharmacal triumph, and the form lends itself most conveniently to administration. Each pillet contains a hundredth of a grain of Cactina, and, having been able to test the value of them in several cases, we have found them most reliable and efficacious, and are glad to give them a word of commendation.—*Medical Press* (London, Eng.).

The Medical Age.

Vol. XII. DETROIT, MARCH 10th, 1894. No. 5.

Original Articles.

CONSUMPTION AS A DISEASE DANGEROUS TO THE PUBLIC HEALTH.*

BY HENRY B. BAKER, M.D., LANSING, MICH.

The invitation to address you on the subject of Consumption as a "disease dangerous to the public health," probably came because of the action by the State Board of Health at its meeting September 30th, 1893, in adopting a resolution which reads as follows:

Resolved, That hereafter. consumption (and other diseases due to the *Bacillus tuberculosis*) shall be included in the official list of 'Diseases dangerous to the public health,' referred to in sections 1675 and 1676 Howell's Statutes, requiring notice by householders and physicians to the local health officer as soon as such a disease is recognized.

My belief is that a majority of the members of this Society understand quite well the prospective utility of the action taken by the State Board of Health. I feel that I am not called here to defend the action taken, but invited to suggest, and receive suggestions, how the best possible advice can be given to all classes of persons, so that the vast amount of sickness, suffering, expense and mortality caused by tubercular disease may be greatly lessened.

My first suggestion is, that the purpose of the resolution is to secure, to the local health authorities and to the State Board of Health, information of the location of each case of well-developed consumption, with the view of placing in the hands of the patient reliable information how to avoid re-infecting himself or herself, and how to avoid giving the disease to others; with the view of placing in the hands of the patient's family, or others most endangered, information how to avoid contracting consumption; also with the view of instructing superintendents of public buildings how best to restrict the spread of the disease. Without such information, thousands will contract this deadly disease, and die. With such information, it is believed that hundreds of these persons may be entirely saved.

There is good evidence for such a belief, in the experience in Michigan in the restriction of scarlet fever. When about twenty years ago the State Board of Health began to teach the people of Michigan that scarlatina was a "disease dangerous to the public health," the Board met with the opposition of prominent men in the medical profession. However, the Board persisted in such teaching, and it did so by a method very similar to that which it is now proposed to employ with respect to consumption. The essentials of the method were as follows:

Notice to the local health authorities is required to be made by the physician who is called to treat a case of the disease, also by the householder in case the physician neglects the duty:

Prompt report by the local health officer to the Secretary of the State Board of Health:

Prompt response by the Secretary of the State Board, supplying the local health officer with copies of a leaflet or pamphlet, telling just how to restrict the disease, with request that the local health officer cause them to be distributed to the *neighbors* of *the premises* placarded for that disease.

The results of this method of action are very interesting. Some years ago I concluded that the method had been in operation long enough for its effects to begin to show in the mortality statistics which are collected and published by the Secretary of State; so I compiled a table of the mortality in Michigan by years before, and by years since, that method of action was adopted. This table evidenced a very considerable reduction in the mortality had occurred during the years the distribution of pamphlets by the State Board of Health had been in operation. At the meeting of the International

* Read before the Wayne County Medical Society.

Conference of State and Provincial Boards of Health, at Toronto, Ontario, in 1886, I had the honor of presenting the evidence of the success which had followed the action in Michigan. A prominent sanitarian, who had been the executive officer of one of the oldest State boards of health since its organization, said: "If it is true there has been a diminution in disease in Michigan since the organization of the State Board of Health, owing to the distribution of circulars and documents, then there is a new means of prevention."* Well, it was true, and that diminution has continued, so that from the time the work began—in 1874—up to the close of the year 1890 the death-rate from scarlet fever in Michigan was less than one-half what it had been previous to the beginning of the work. I attribute a very large part of this decrease in the death-rate to the intelligent coöperation of the people with physicians and health officers, in the two principal measures which the pamphlets taught to the people, namely, isolation and disinfection—isolation of all infected persons and things, and their complete disinfection before coming in contact with healthy persons.

I wish to call attention to the fact that the method does not consist simply in printing pamphlets containing the best that is known on the subject of restricting a given disease, and then distributing copies indiscriminately. If the distribution were in that manner, most of the pamphlets would undoubtedly go into waste-baskets, without having been read.—It would be like striking iron when it is cold. The method which the Michigan State Board of Health has employed is "striking the iron while it is hot," in order that an impression may be made which will be deep and lasting. The pamphlets are distributed to the neighbors of the persons sick with the dangerous disease. Sooner or later that disease occurs in every part of the State; therefore, after a time the people in every locality have had the pamphlets placed in their hands at a time when, because of the known proximity of the dangerous disease, their own household has been threatened—and under such circumstances they were ready to receive the statements put before them by the State Board. The result is that the people throughout this State now quite generally know that scarlatina is a disease which may be restricted. They are much more ready to coöperate with the health officers for its restriction than they were before that "campaign of education" had been planned and executed.

The office of the State Board of Health has a force of clerks constantly employed in this "campaign of education" relative to the communicable diseases which cause most deaths in Michigan. But, while much can be done relative to any disease which, like scarlet fever or smallpox, is promptly reported, little can be done relative to a disease which, like consumption, is not promptly reported. Relative to such diseases, what is done is of the class of work I have likened to striking iron that is cold. The State Board of Health has printed ten editions of its pamphlet (a total of 146,000 copies) on the restriction of scarlet fever; but of its leaflet on the restriction of consumption, only two editions (or 10,000 copies in all) have been printed. To be sure, the work on scarlet fever began some years first; but relative to this disease we are distributing about fifteen thousand copies per year, while as to consumption we cannot find place for more than half that number. In order properly to carry on the "campaign of education" relative to consumption, we need to know just where each consumptive person is, so that we can send our valuable information where it is needed, and where it will be likely to be read, and be to some extent in some instances acted upon.

What I have said will serve to indicate one very important reason why consumption should be promptly reported to the local health authorities, and by the local health officer to the State Board of Health. Then the local officers should place in the hands of the consumptive person, and in the hands of those most likely to be endangered by the consumptive person, and in the hands of those who control the movements and actions of persons liable to spread consumption, plain instructions how to restrict the disease. This is made practicable by the State Board of Health, which supplies leaflets of such in-

* Page 53, Proceedings of Conference at Toronto, 1886.

structions for such purposes. I have here samples of such leaflets, of which I shall be glad to have each person here have a copy. If I do not distribute enough here, or if at any time any physician wishes a few copies, for distribution where they will be likely to be read, he can obtain them from the office of the State Board, at Lansing.

The leaflet was undergoing preparation during several years; and it is believed to contain very condensed and reliable statements of the leading facts applicable to the restriction and prevention of consumption.

Fallacies.—In the minds of some people there seem to be fallacies which prevent them from understanding how it is possible to restrict the dangerous communicable diseases. Some of these have been held relative to other diseases, and, having been proved fallacies, have been abandoned; yet they come up anew every time a new disease is added to the list of those attempted to be restricted. I remember well how some doctors used to talk about the causes of epidemics of smallpox, giving great emphasis to expressions of belief that a main cause was an "epidemic condition of the atmosphere." We now know that smallpox does spread most easily after people have experienced a cold dry atmosphere; and the same is true of consumption. But we also know that the main cause of an epidemic of smallpox is the wide dissemination of the specific cause of smallpox, conjoined with a general neglect of vaccination. So we now know also that the reason why consumption causes so many deaths is that the specific cause of the malady is so generally and widely spread.

The next fallacy to which I refer is that the germs of the dangerous communicable diseases are always and everywhere present. That mistaken idea was prevalent along with the one just mentioned, the idea being that, the germs being always present, the "epidemic condition of the atmosphere" was what made it possible for the disease to spread. We now believe that, for months at a time, the State of Michigan is entirely free from the specific cause of smallpox; we believe that many localities in Michigan are, for months at a time, entirely free from the specific cause of scarlet fever and of diphtheria. I believe that the homes of the people of Michigan are, as a rule, nearly free from the specific cause of consumption, even though the germ of that disease is perhaps more generally spread than is the germ of any other dangerous disease. There are probably at least three thousand new cases of consumption occurring in Michigan every year; in the three thousand households in which the disease has found a lodgment, the specific cause is liable to be thoroughly scattered; and some of these households, in which the sputa are not carefully dealt with, are dangerous centres of infection. The *public places* visited by some of the thousands of coughing consumptives now in Michigan are especially dangerous when, as in the case of postoffices, the visitors are liable to expectorate on the floor. But the idea that tubercle bacilli are generally distributed, so that all of us are necessarily inhaling them frequently, I believe is a fallacy. I think that the experiments by Koch and by Cornet have proved this; Cornet proved that tuberculous infection is not found in the dust of streets and in many other places, except in isolated instances. It is a fallacy which I think does much harm, because it leads people to think that it is not practicable to avoid contracting this dangerous disease, except through ordinary hygienic measures, which I believe we now know to be not always sufficient to prevent the disease. It now seems probable that, given the introduction into the body of any person, however vigorous, of a sufficient number of the specific organisms which cause consumption, the disease may be established in that person; furthermore, it seems to be proved that, however reduced a person may be, consumption does not occur except through the introduction of the specific cause.

Another fallacy is that which leads people to believe that the germs of consumption and of other diseases reproduce in the atmosphere. The conditions under which tubercle bacilli reproduce are quite well known—they require organic material, and a temperature not ordinarily reached by the atmosphere.

Another fallacy is that which causes persons to reason that because we cannot hope to destroy all the germs of the disease, therefore there is no use in trying to destroy any. How false this is, may be seen by applying it

Conference of State and Provincial Boards of Health, at Toronto, Ontario, in 1886, I had the honor of presenting the evidence of the success which had followed the action in Michigan. A prominent sanitarian, who had been the executive officer of one of the oldest State boards of health since its organization, said: "If it is true there has been a diminution in disease in Michigan since the organization of the State Board of Health, owing to the distribution of circulars and documents, then there is a new means of prevention."* Well, it was true, and that diminution has continued, so that from the time the work began—in 1874—up to the close of the year 1890 the death-rate from scarlet fever in Michigan was less than one-half what it had been previous to the beginning of the work. I attribute a very large part of this decrease in the death-rate to the intelligent coöperation of the people with physicians and health officers, in the two principal measures which the pamphlets taught to the people, namely, isolation and disinfection—isolation of all infected persons and things, and their complete disinfection before coming in contact with healthy persons.

I wish to call attention to the fact that the method does not consist simply in printing pamphlets containing the best that is known on the subject of restricting a given disease, and then distributing copies indiscriminately. If the distribution were in that manner, most of the pamphlets would undoubtedly go into waste-baskets, without having been read.—It would be like striking iron when it is cold. The method which the Michigan State Board of Health has employed is "striking the iron while it is hot," in order that an impression may be made which will be deep and lasting. The pamphlets are distributed to the neighbors of the persons sick with the dangerous disease. Sooner or later that disease occurs in every part of the State; therefore, after a time the people in every locality have had the pamphlets placed in their hands at a time when, because of the known proximity of the dangerous disease, their own household has been threatened—and under such circumstances they were ready to receive the statements put before them by the State Board. The result is that the people throughout this State now quite generally know that scarlatina is a disease which may be restricted. They are much more ready to coöperate with the health officers for its restriction than they were before that "campaign of education" had been planned and executed.

The office of the State Board of Health has a force of clerks constantly employed in this "campaign of education" relative to the communicable diseases which cause most deaths in Michigan. But, while much can be done relative to any disease which, like scarlet fever or smallpox, is promptly reported, little can be done relative to a disease which, like consumption, is not promptly reported. Relative to such diseases, what is done is of the class of work I have likened to striking iron that is cold. The State Board of Health has printed ten editions of its pamphlet (a total of 146,000 copies) on the restriction of scarlet fever; but of its leaflet on the restriction of consumption, only two editions (or 10,000 copies in all) have been printed. To be sure, the work on scarlet fever began some years first; but relative to this disease we are distributing about fifteen thousand copies per year, while as to consumption we cannot find place for more than half that number. In order properly to carry on the "campaign of education" relative to consumption, we need to know just where each consumptive person is, so that we can send our valuable information where it is needed, and where it will be likely to be read, and be to some extent in some instances acted upon.

What I have said will serve to indicate one very important reason why consumption should be promptly reported to the local health authorities, and by the local health officer to the State Board of Health. Then the local officers should place in the hands of the consumptive person, and in the hands of those most likely to be endangered by the consumptive person, and in the hands of those who control the movements and actions of persons liable to spread consumption, plain instructions how to restrict the disease. This is made practicable by the State Board of Health, which supplies leaflets of such in-

* Page 53, Proceedings of Conference at Toronto, 1886.

structions for such purposes. I have here samples of such leaflets, of which I shall be glad to have each person here have a copy. If I do not distribute enough here, or if at any time any physician wishes a few copies, for distribution where they will be likely to be read, he can obtain them from the office of the State Board, at Lansing.

The leaflet was undergoing preparation during several years; and it is believed to contain very condensed and reliable statements of the leading facts applicable to the restriction and prevention of consumption.

Fallacies.—In the minds of some people there seem to be fallacies which prevent them from understanding how it is possible to restrict the dangerous communicable diseases. Some of these have been held relative to other diseases, and, having been proved fallacies, have been abandoned; yet they come up anew every time a new disease is added to the list of those attempted to be restricted. I remember well how some doctors used to talk about the causes of epidemics of smallpox, giving great emphasis to expressions of belief that a main cause was an "epidemic condition of the atmosphere." We now know that smallpox does spread most easily after people have experienced a cold dry atmosphere; and the same is true of consumption. But we also know that the main cause of an epidemic of smallpox is the wide dissemination of the specific cause of smallpox, conjoined with a general neglect of vaccination. So we now know also that the reason why consumption causes so many deaths is that the specific cause of the malady is so generally and widely spread.

The next fallacy to which I refer is that the germs of the dangerous communicable diseases are always and everywhere present. That mistaken idea was prevalent along with the one just mentioned, the idea being that, the germs being always present, the "epidemic condition of the atmosphere" was what made it possible for the disease to spread. We now believe that, for months at a time, the State of Michigan is entirely free from the specific cause of smallpox; we believe that many localities in Michigan are, for months at a time, entirely free from the specific cause of scarlet fever and of diphtheria. I believe that the homes of the people of Michigan are, as a rule, nearly free from the specific cause of consumption, even though the germ of that disease is perhaps more generally spread than is the germ of any other dangerous disease. There are probably at least three thousand new cases of consumption occurring in Michigan every year; in the three thousand households in which the disease has found a lodgment, the specific cause is liable to be thoroughly scattered; and some of these households, in which the sputa are not carefully dealt with, are dangerous centres of infection. The *public places* visited by some of the thousands of coughing consumptives now in Michigan are especially dangerous when, as in the case of postoffices, the visitors are liable to expectorate on the floor. But the idea that tubercle bacilli are generally distributed, so that all of us are necessarily inhaling them frequently, I believe is a fallacy. I think that the experiments by Koch and by Cornet have proved this; Cornet proved that tuberculous infection is not found in the dust of streets and in many other places, except in isolated instances. It is a fallacy which I think does much harm, because it leads people to think that it is not practicable to avoid contracting this dangerous disease, except through ordinary hygienic measures, which I believe we now know to be not always sufficient to prevent the disease. It now seems probable that, given the introduction into the body of any person, however vigorous, of a sufficient number of the specific organisms which cause consumption, the disease may be established in that person; furthermore, it seems to be proved that, however reduced a person may be, consumption does not occur except through the introduction of the specific cause.

Another fallacy is that which leads people to believe that the germs of consumption and of other diseases reproduce in the atmosphere. The conditions under which tubercle bacilli reproduce are quite well known—they require organic material, and a temperature not ordinarily reached by the atmosphere.

Another fallacy is that which causes persons to reason that because we cannot hope to destroy all the germs of the disease, therefore there is no use in trying to destroy any. How false this is, may be seen by applying it

to that other disease which I have mentioned —scarlet fever. That reasoning was so applied by some in Michigan in 1873; but in 1893 we knew that many thousands of lives had been saved in Michigan by our efforts to restrict scarlet fever. That some other lives were not saved, does not change the fact that thousands were saved. And those thousands were worth the effort.

My belief is that consumption is a communicable disease; that it has been proved to be such by the most scientific methods of experimentation, experience, and reasoning; that it is now held to be such a disease by a great majority of the leading men of science who are best qualified to judge. I think we know how it is generally spread, and about what proportion is spread in one manner and what in other ways. On this last-mentioned subject I will cite a few facts; but the fact of its being a communicable disease has, I think, been too well proved to need further evidence, except to convince the few remaining skeptics, and that attempt may be omitted on this occasion.

The fact that consumption has been caused by the accidental and experimental inhalation of the bacilli, both in animals and in man, joined with the fact that the greatest known source of the bacilli is the sputa of consumptives, and with the other fact that consumption of the lungs is the form of tubercular disease which is the most common, constitutes not all the evidence which has accumulated tending to prove that tubercular disease is usually spread by what goes out from consumptive lungs, and is usually spread to previously unaffected lungs — in other words, spread by the inhalation of dust from dried sputa. Thus Doctor C. G. Currier, in a paper read before the New York Academy of Medicine, says:

Summarizing the observations made in two hundred and twenty-one autopsies of tubercular cases, Grawitz, formerly Virchow's assistant, reported one hundred and fifty-two cases as primary in the lungs, nine as primary in the digestive tract, three arising from external wounds, and the original entrance of the infection was doubtful in the other cases.*

The evidence is strong that the greatest of all sources of danger is in the sputa of well developed cases of lung-consumption; therefore it is of the greatest importance that such cases be reported at once to the local health officer, and by him to the State Board of Health. Fortunately it is in just such cases that the disease can be recognized with certainty. When that condition is reached, the friends of the patient are frequently able to recognize the disease. But the physician has, in the bacilli in the sputa, positive evidence of the presence of the dangerous element. If the attending physician is not sufficiently expert in the use of the microscope, or if he prefers to have such work done by a specialist, there are now those in all cities, and in many country villages, who will gladly do such special work. In New York City the Board of Health will cause such examinations to be made. It is a fact which is extremely encouraging (and leads to the hope that much may be speedily accomplished), that as soon as the disease reaches the stage of greatest danger to the public, it is so easily and certainly recognized. If the bacilli are given off in very considerable numbers, they are to be found by the usual methods, with the microscope, by means of stains.

There are other facts which seem to warrant the hope that the restriction of consumption will prove to be easier than the restriction of scarlet fever. The specific cause of scarlet fever seems to be not infrequently given off from the body in such a form as to immediately become a part of the dust in the clothing and about the patient. The specific cause of consumption is not often so given off; the exhaled breath does not contain it except when coughed out. The location of the specific cause is generally known; it is quite generally associated with a substance which is visible; it may be so treated that it does not readily become a part of the dust in the patient's clothing, or about the patient, or of the dust of rooms occupied by the consumptive person.

These being the facts, it seems quite possible for a consumptive person to so care for the general safety that he may move freely in public and in private without danger of spreading the disease. But in order that this may be done, it is essential that the consumptive person have complete knowledge of the

* *Deutsche Militairärztl. Zeitschr.*, 1889, Heft 10, Ref.

methods by which consumption is spread, and by which it is restricted. And this knowledge is not enough; there must be a conscientious determination to perform carefully all those duties required to make sure that the specific cause of the disease is promptly destroyed, and not permitted to endanger the life of another person. If the patient has not that knowledge, is incapable of comprehending it, or, having the knowledge, if he has not also a conscientious regard for the safety of others, the public interests demand that such a person having well-developed consumption of the lungs shall be isolated, for the public welfare, because he has the most dangerous communicable disease now known to us. The best place for all such persons is in a special hospital, where under well-planned rules and trained attendants the danger of spreading the disease shall be reduced to the minimum.

It is evident that the idea of isolating consumptives is extremely unpleasant to many people, probably to all, unless through a study of the subject it has come to be realized how great is the price humanity pays for the freedom accorded. I believe it is practicable for intelligent, conscientious consumptives to so act as to avoid spreading the disease, and to do this without any great degree of isolation. Relative to the isolation of consumptives, then, the question is restricted to the propriety of enforcing care for the rights of the whole people upon those consumptives who without compulsion are incapable of taking, or unwilling to take, the necessary care to avoid jeopardizing the lives of those who may come within the circle of their infection. For myself, I have no hesitation in expressing the belief that all such consumptives should be isolated. Insane consumptives should be isolated; consumptives in prisons, poor-houses, and reformatories should be isolated.

I think that every public building should be managed as if it were believed that some of its visitors will belong to a class of consumptives who will disregard the risk to the lives of the other visitors. The ventilating registers should be at the floor level; and all such precautions should be taken as will reduce to the minimum the danger of the inhalation of the dust of consumptive sputa. Air that has once been the circuit of an inhabited room should never be warmed over and sent around again to be breathed and rebreathed, with all of its accumulation of microscopic causes of consumption or other disease. I firmly believe that the "indirect" system of heating inhabited rooms is a powerful agent for the lessening of the spread of consumption and of all such communicable diseases; because in order to heat a room well by that method a quantity of air must constantly pass through; and if the foul-air exit is at the floor level, as it should be, much of the dust from the floor tends to pass out, and therefore does not come up to be breathed in, as it does in rooms heated by stoves or by steam pipes or radiators within the room.

On the whole, the outlook is favorable for a speedy decline of this most important disease. I believe that consumption is a disease much easier than scarlet fever to restrict and prevent. The mortality statistics of the Secretary of State and the sickness statistics of the State Board of Health agree in proving that one-half of the sickness and deaths from scarlet fever has disappeared. Smallpox formerly caused more deaths than any other malady; now it is at the bottom of the list of dangerous diseases. In centuries past, leprosy hospitals were scattered all over England; now the disease is rare, and I believe special hospitals had much to do in making it rare. The period of incubation in leprosy is so long, and the disease itself so easily restricted, that we cannot hope that consumption will become as rare as leprosy, perhaps not as rare as smallpox; yet, aside from the protective power of vaccination, consumption seems to be a disease which is more easily restricted than is smallpox. And four-fifths of the mortality from smallpox in Michigan has disappeared through the system of notification, reports, distribution of pamphlets, and efforts of local health authorities—work similar to that which it is proposed shall be carried on with reference to consumption. Statistics prove beyond question that where these measures are faithfully carried out, the cases and deaths from both scarlet fever and diphtheria are reduced by four-fifths. I have no doubt that consumption will be reduced to an extent fully as great wherever these measures are faithfully

carried out. Is not that a consummation devoutly to be wished?

As evidence how those sanitarians and specialists whose attention has been most attracted to this subject believe, it may be mentioned that several representative bodies of sanitarians have already voted that consumption should be reported to the health authorities, and efforts made for its restriction by educational measures, special hospitals, registration of infected houses, disinfection of rooms after deaths of consumptive occupants, etc. The American Public-Health Association has so voted; the Public-Health Section of the Pan-American Medical Congress unanimously so voted; the Congress of Tuberculosis, in Paris in 1888, passed a resolution that tuberculosis be recognized as a contagious disease, and in 1891 added a resolution recommending systematic disinfection. The North London Hospital for Consumptives issues directions to its out-patients and to its ward-patients, recognizing the contagious nature of tuberculous phthisis, and suggesting precautions.* The Royal National Hospital for Consumptives, Ventnor, gives special instructions not to spit on the floor, and just how to deal with sputa.* The Manchester Hospital for Consumptives takes a similar position. The Medical Officer of Health for Manchester undertakes to purify, *free of cost*, any house that may be notified to him by competent medical men.* Last year the Northwestern Branch of the Society of Medical Officers of Health drew up a memorandum on the subject, which has been pretty widely distributed in the North of England. In this memorandum the infectious nature of consumption is definitely laid down, and dried sputum in the form of dust is indicated as the vehicle of contagion.* The County Borough of Oldham, in England, gives similar "precautions against taking consumption."* The French *Ligue Préventive contre la Phthisie Pulmonaire* says: "The most frequent and powerful source of infection lies in the expectoration of consumptive patients."* The danger from permitting this to dry and become dust is then emphasized. The expert advisors of the New York City Board of Health have formulated statements of the contagiousness of tuberculosis, and rules for its restriction; and the Board has entered upon the work of its restriction.

Recently (Jan. 12th, 1894) the College of Physicians of Philadelphia discussed the question whether it would ask the local board of health to provide for the registration and disinfection of houses of consumptives, and whether it would ask for municipal hospitals for consumptives. It passed a resolution which implies that the duties of physicians in charge of cases are: "insisting on the disinfection of the sputum and of the rooms, on adequate ventilation, and on the separation of the sick from the well so far as possible;"* yet the meeting declared that physicians can do all this work for the public safety better than it could be done by the board of health. The vote was to request "that no official action be taken by the Board of Health, except the insisting on disinfection of rooms in which consumptives have lived and died in instances in which such procedure is not likely to have been adopted under the direction of the attending physician."*

Although it is safe to say that no such action as this last mentioned would be likely to be taken by a meeting of practical sanitarians, accustomed to look mainly to the interests of the people, undoubtedly the Philadelphia physicians were acting conscientiously for the public good. But we all know that the duty of reporting a patient sick with a dangerous communicable disease is a disagreeable duty, which every physician would prefer should be left to the patient or his family; the physician's sympathies are strongly with the patient, and are not yet strongly aroused for the unseen and unknown persons who may or may not hereafter become ill because of this present patient. The resolution assumes that all the disagreeable directions relative to "disinfection of sputa and rooms, adequate ventilation, separation of the sick from the well," etc., which are almost wholly in the interest of persons other than the patient, will be given by the physician employed to treat the person who is sick! To a limited extent, perhaps those measures will be thus attended to,

* Doctor John B. Roberts, in *Medical News*, Philadelphia, Feb. 10th, 1894.

* *Medical News*, Philadelphia, Feb. 10th, 1894.

but only as of secondary consequence. Attention to such details is not the main function of the medical man; when a physician is employed, the time for prevention has passed, the time for curative measures has arrived, and it is for that purpose a physician is called.

Again, there is enough to be learned about curative measures to fully occupy all the time of the most intelligent physician, so it is fair to suppose that there are other subjects on which the average practitioner does not know as much as do those whose whole lives are devoted to those particular subjects—just as there are subjects connected with the practice of medicine and surgery on which the average sanitarian knows very little, and what he does know might be of precious little use to those on whom he might undertake to practice. The best advice on sanitary subjects may possibly come from sanitarians who have devoted their lives to the study and practice of that specialty, and it may be well for the people generally to have their sanitary advice from sanitarians; it certainly is best that they have their medical and surgical advice from physicians and surgeons.

The truth is that public-health administration requires not only some knowledge of the causation of diseases, but also expert ability in some branches of social science not necessarily studied by physicians. Let us suppose that the resolution recently passed in Philadelphia related to some other specialty than sanitation. How would it sound if it were changed slightly so as to read as follows:

Resolved, That persons suffering from diseases and injuries of the eye generally require operations necessitating great skill, delicate manipulation, and specially-prepared instruments and rooms; but such service should always be performed by the general practitioners, because they can do it "better than any rules that can be carried out by the" ophthalmologists.

Or, it might be slightly changed so as to read:

Resolved, That gunshot wounds of the abdomen, and other conditions which require opening into the abdominal cavity and operations upon the contents, call for procedures which are complicated, because of the need for measures to ensure aseptic results, freedom from cold, and numerous details only to be learned through much study and experience; but these operations should always be performed by general practitioners, because they can do this service "better than any rules that can be carried out by the" surgeons who make operations in the abdomen a specialty.

There is this to be said, however, about sanitary advice given by active practitioners: From the very fact of its being given by the attending physician, in the spirit in which it is then given, by one who is manifestly interested first of all in the welfare of the patient, it is very much more liable to be accepted as being kindly intended for the good of the patient and those he holds dear, than is the same advice given by one having mainly in view the interest of others than the patient himself. The general practitioner is a great power for good in his work to educate the people in sanitary measures.

One important reason why public-health work should be done by the public officials, and not by physicians or householders, is because considerable expense is involved: in the best preparation of the exact information which should be imparted to the patient, and of that which should be imparted to those most liable to be endangered, and to those having control of the movements and actions of persons liable to spread consumption; also in having such information in such printed form that it can be read at leisure, and not hurriedly and imperfectly communicated verbally as of secondary importance and in language not always understood. In the disinfection of rooms, also, the disinfection being for the public good, it is proper that the expense therefor should be a public one and not fall on the physician or the householder.

The weakness of the position assumed by the Philadelphia physicians—that there should be no efforts for restriction, except the advice by physicians—is seen in the facts: First, that *so large a proportion of those who have consumption are poor people, who have no physician regularly:* Second, a great many other consumptives, having, as they think, exhausted the resources of many physicians, live for a considerable time before their death without the care of any physician; they are in that stage of the disease when they are of the greatest danger to the public, and the guard-

ians of the public health have a right to know where they are, and whether or not they are properly guarding against the spread of this "great white plague:" Third, there is a large class of consumptives who know nothing of bacteriology, and who, by the mild talk of their physician (when they have one), cannot be brought to appreciate the fact that their sputa can do much harm. Many such people can be taught to properly care for their sputa only through an intimation by the health officials that unless they do so, isolation will be enforced.

At the Philadelphia meeting of physicians, some of the speakers argued that unless every infected house was disinfected, and every house occupied by a consumptive kept free from infection, no attempt should be made by the Board of Health. Let us suppose that this were said with reference to diphtheria or scarlet fever! Because not all lives may be saved, shall no attempt be made to save some lives? It has been proved in Michigan that where isolation and disinfection are promptly and fully enforced, four-fifths of the cases and deaths from those two diseases are prevented. Because these two measures are not always promptly or completely enforced, shall we abandon the work entirely? I say we shall not. Under the *imperfect* methods of the past in this State the death-rate from scarlet fever has been reduced one-half. If we can reduce the death-rate from consumption one-half we will save the lives of fifteen hundred persons a year in this one State. I believe it can easily be done, and that it is eminently worthy of being done.

I sincerely trust that the medical profession in Michigan will coöperate freely with the health authorities, who are acting for all the people, in every practicable action for the restriction of consumption.

IS THE ACTION OF BEHRING'S CURATIVE SERUM BASED ON THE DESTRUCTION OF THE DISEASE-POISON?

BY PROFESSOR H. BUCHNER.

Sero-therapy is on the point of becoming transformed from an object of pure scientific investigation, into one of practical and general nature fraught with the highest interest to the entire profession. It is now my duty to present without reservation our entire knowledge of the factors constituting a problem whose solution promises to place in the hands of the physician new and undreamed-of auxiliaries.

But what question, with respect to the *modus operandi* of the so-called curative serum, could be more important than whether the latter is actually capable (as Behring declared explicitly at the outset and has since repeatedly asserted) of effecting a *direct destruction of the specific virus in the body?* The affirmative decision of this claim would be an achievement not to be surpassed in magnitude and importance, placing us at one bound on the summit of medical power.

The clearer this fact, the more besetting becomes the doubt whether this theory has been actually demonstrated experimentally, or can be so demonstrated. In vain, however, do we seek such a clinching proof in Behring's numerous writings on sero-therapy and the production of immunity, despite the wealth of experiments and observations in which those writings abound.

The only ground for the theory of the virus-killing action of the antitoxine is to be found in an experiment described in the first report of Behring and Kitasato,* in which a mixture of tetanus virus and antitoxic serum, prepared in a test-tube, proved entirely inert on injection into the animal organism. The investigators mentioned felt warranted in regarding this as a proof of the destruction of the poison. But, manifestly, this inertness of the mixture may have been owing to the fact that the antitoxic serum (although directly inert with respect to the virus), by its immediate production of immunity in the living organism, precluded the development of a toxic process in the latter. Accordingly, Behring's experiment, as has been shown by others (notably Stern), was altogether unfitted to settle the mooted question, and other demonstrating experiments were urgently required for the establishment of this fundamental point.

In the autumn of 1892 I obtained a sufficient quantity of tetanus bacilli, possessing a

* Ueber das Zustandekommen der Diphtherie-Immunität und der Tetanus-Immunität bei Thieren, *Deutsche Med. Woch.*, 1890, No. 49.

high degree of virulence, and entered on the study of this preliminary question, which is of paramount importance in determining the value of the therapy of blood-serum. After the lapse of half a year I was in position to assert, as a result of my investigations, *that the presumed destruction of the virus does* NOT *occur in tetanus, and that to the tetanus antitoxine an immunizing influence only can be attributed.**

Singularly enough, these experimental results, so important in their bearing on the *modus operandi* of the antitoxic serum, are yet so little known that a recent review of the present state of sero-therapy by Guenther† fails even to mention them.

In order to perform these experiments in a reliable manner, it was necessary to obtain, first of all, a tetanus virus of absolutely permanent and uniform potency, and such a product I secured by producing the virus in a dry state—a mode of manufacture first resorted to on this occasion.‡ I likewise worked up the serum of my immunized animals with antitoxine produced by the dry process, and was now in position to determine accurately with these two uniform and unchangeable substances the doses needed in my experiments.

The correct order of experiment, in contradistinction to that of Behring, is as follows: The experimentor prepares a mixture of virus and so much antitoxic serum, or the antitoxine produced from the latter, that the action on a certain species of animal—white mice, for example—is approximately *nil*. After this fact has been demonstrated on a considerable number of animals, I inject absolutely equal quantities of this mixture, which has thus proved neutral with respect to mice, into another species of animals relatively more susceptible to the tetanus virus—guinea-pigs. If the assumption of Behring was correct, the toxic potency of the mixture which exhibited no reaction on white mice would have continued *nil;* for, were the poison actually destroyed, as it seems to be superficially, or were it exterminated within the animal organism, on contact with the antitoxine *then, this mixture would, of necessity, have to remain inert on injection into any other species of animal whatsoever.*

This absolutely necessary consequence, however, is not realized. On the contrary, in the guinea-pigs—although *absolutely equal* quantities of the mixture were employed with these *much larger* animals—I observed *decidedly more pronounced symptoms of tetanic intoxication.*

This remarkable result proves incontrovertibly *that the virus is not destroyed in the mixture which proves neutral with respect to mice, and that in reality virus and antitoxine do not act each upon the other, but rather that both substances exert a separate action on the animal organism.*

Probably the tetanus virus exerts in the highly susceptible body of the guinea-pig a relatively greater potency than in the mouse: in the case of the guinea-pig a somewhat larger ratio of antitoxine was required in order to produce a neutral mixture. In other words: The specific organization of the animal body in which the mixture of toxine and antitoxine is operating constitutes a material condition or factor which must not be overlooked.

In order to give due heed to all the possibilities, I performed other experiments, in which the virus and antitoxine were permitted to remain in contact in a test tube for a longer time. These experiments gave the same result: *here, too, the virus remained unmodified despite the presence of the antitoxine. Accordingly, no destructive action of the antitoxine on the tetanus virus occurs, either within the test tube or within the organism; rather, both substances exert an antagonistic action only in so far as the one—the antitoxine—renders the organism, the tissues and the cellular territories, unsusceptible to the action of the other—the toxine or virus.* Accordingly, in transferring the serum of immune animals to other animals or to man, a *toxic process* or immunization is alone involved.

How important is the bearing of this truth on the therapy of blood-serum, needs no particular analysis. Indeed, only in this manner do we place sero-therapy upon a *scientific foundation*, for hitherto we have had no clear

* Ueber Bacteriengifte und Gegengifte. Address before the Medical Society at Munich, June 7th, 1893. *Münch. Med. Woch.*, Nos. 24 and 25.

† *Deutsche Med. Woch.*, 1893, No. 46.

‡ Behring employed only the carbolized tetanus-bouillon. Recently, and for the first time after me, Brieger obtained the tetanus virus in a dry form.

conception of the processes actually occurring. Substantially, therefore, sero-therapy is the *speediest possible immunization of all the cellular territories not yet invaded by the specific action of the virus.* That this fact means a radical modification of the hopes originally cherished and yet clung to, is unfortunately only too true. Very different would be the state of things if, as Behring asserts, at every moment of disease we had it within our power to *destroy* the specific poisons present in the body, thus *clearing* the organism of virus. This achievement has not yet been effected, and there is no ground for the hope that it soon will be.

The sero-therapeutic process can exert no influence on the portions of tissue *already diseased;* at all events, no trace of proof has yet been adduced in support of such action, and there is not the slightest ground for such a theory. Accordingly, in the strict sense of the term, there is no "curative serum," but only an "immunizing serum," and no actual "cure" through immune serum, since the word "cure" here plainly means "destruction of virus."

It would carry us too far to recite the inevitable consequences thus resulting to sero-therapy. It is clear, however, that everyone who wishes to institute therapeutic experiments with the immunizing serum should be conscious of the true conditions. It is, therefore, not right to ignore the results of the foregoing experiments, unwelcome as they may be—a thing which Behring has done in his latest publication, since he still clings to the unfounded hypothesis of virus-extermination.*

All the more strenuously must we guard against this error, inasmuch as every day furnishes fresh confirmation of the theory of this problem which I have formulated from experiment. Thus, very recently, Centanni† rejects the theory of Behring with respect to the nature of the immunizing substance, reporting as the result of his investigations that there is no direct action of the serum on the specific virus; that the serum is rather to be regarded only as conveying the immunizing principle into the elements of the tissue.

Tizzoni himself, in a very recent work published in collaboration with J. Cattani, has avowed his decided opposition to the Behring theory, on the basis of his entire experience.* The testimony of Tizzoni is certainly to be accepted as perfectly reliable, since he would naturally, in his capacity as one of the most deserving and prominent champions in the cause of sero-therapy, be inclined to entertain the Behring theory if possible. Nevertheless, Tizzoni states without reservation the true conditions, his exhaustive consideration of the question leading him to the conclusion:

Hence, I do not consider proper the name "antitoxine," given to the substance which cures tetanus, for it is not an antidote which exterminates or decomposes the poison, but only a product which protects the organism against the virus; for this reason also, I do not consider as unobjectionable the use of the word "cure," if applied to the treatment of tetanus with the blood-serum of vaccinated animals—for with this serum we do not combat and cure the disease, but rather seek only to prevent its evil consequences, protecting by immunization those portions of the body which have not yet been invaded by the virus. The term "cure of tetanus" should be replaced by "curative immunization." . . . The blood-serum of vaccinated animals does not act like a medicinal agent which neutralizes a certain morbid principle in the organism and opposes itself to certain functional disturbances, but, in all probability, it is serviceable in the cure of tetanus by immunizing the not yet tetanized parts of the body, thus restricting the tetanus to a local form.

Thus it is seen that the experiments of Tizzoni and Cattani lead to the identical conclusions inevitably deduced from my own experiments. Hence all doubt is excluded.

But the least questionable testimony on

* Behring: "Die Gewinnung der Blutantitoxine und die Classificirung der Heilbestrebungen bei ansteckenden Krankheiten," *Deutsche Med. Wochenschr.*, 1893. No. 48.

† Centanni, E.: "Die Specifische Immunisation der Elemente der Gewebe. Ein Beitrag zur Kenntniss der Immunität und der Serumtherapie bei Rabies." *Deutsche Med. Wochenschr.*, 1893, Nos. 44 and 45.

* G. Tizzoni and J. Cattani: "Weitere Experimentelle Untersuchungen über die Immunität gegen Tetanus," *Berl. Klin. Wochenschr.*, 1893, Nos. 49–52.

the untenability of his own hypothesis is furnished by Behring himself, who reports in a recent essay—the same in which he endeavors to maintain the theory of virus-extermination—the latest results of his experiments on immunized animals—results which are utterly irreconcilable with this theory and directly refute it.

According to these new investigations of Behring, the antitoxine may, on the one hand; disappear in time from the blood of animals rendered immune by the virus treatment, without, however, thus extinguishing the immunity; (I will not further discuss here this phenomenon which Behring seeks to explain by an hypothesis which, in my judgment, is inapplicable)—*on the other hand, under the influence of the toxic treatment, an over-sensibility of the living organism may result, which condition does not however exclude the yielding of a serum which possesses a large measure of antitoxic properties.* According to Behring, this may proceed so far "that a horse will possess in one C c. of his blood enough antitoxine to render a quantity of virus innocuous to horses not previously treated, of which a fraction would suffice to kill the horse yielding the antitoxine."

It would be difficult to find any proof more palpable than this fact cited by Behring himself, demonstrating *that an extermination of the virus by the antitoxic serum does not occur.* Otherwise, it would never be possible to observe in an organism containing antitoxic serum of *high potency* the stated over-susceptibility to small doses of specific virus, inasmuch as all the poison ere manifesting its virulence—and the toxic process of tetanus, we know, develops very slowly—must of necessity be already destroyed.

Behring's latest investigations (which will doubtless be soon followed by others), therefore, in themselves refute his assertion, hitherto made, of an extermination of the virus. They, however, corroborate the results of my experiments, according to which even the specific antitoxines involve only an *immunizing influence.* This latter theory renders it easy to understand how an organism may contain antitoxic serum and yet remain over-susceptible. When we know that the antitoxic serum in the organism of the horse in no wise exercises any *direct* action on new accessions of tetanus virus—that the serum is only capable of exerting an *immunizing* (I might perhaps say "blunting," "deadening") action with respect to the virus on normal animal tissues and nerves—we can then comprehend why the latter action forsakes us in *tissues and nerves no longer normal.* According to Behring's theory, however, these new results would remain absolutely unintelligible.

The logical connection of the phenomena, moreover, becomes much clearer with the further conviction that *still another hypothesis of Behring—which declares the antitoxines to be products of the reaction of the animal organism*—is also undemonstrated and erroneous. All the facts and indications rather lead to the conclusion that in the antitoxines we have to deal with *bacterial products*, the character of which does not too greatly deviate from that of the specific *toxalbumins*, for otherwise the reciprocal and specific relation would be impossible. Tizzoni and Cattani have also declared themselves recently as favoring this theory. The specific immunizing (deadening) power of the tetanus antitoxine over the tetanus virus is due solely to the fact that these two substances *substantially correspond in their inherent characteristics* without becoming quite identical. Moreover, the interesting experiment performed by Buschke on himself would seem to indicate that in the healthy human being—in this highly sensitive organism (compared with animals)—the tetanus antitoxine is capable of producing feeble tetanus-like symptoms.* That two substances may be closely related chemically, and yet vary greatly in toxicity, is demonstrated by the almost harmless choline and, on the other hand, the highly toxic neurine, though the latter is distinguished from the former only by its lesser content of water. Perhaps it might also be possible, if someone would carry out the experiments, gradually to render animals unsusceptible to toxic doses of neurine, by prolonged treatment with choline.

The therapy of the blood-serum is, accordingly, not what Behring has always declared it to be—something peculiar *in its principle or*

* "Ueber die Immunisirung eines Menschen gegen Tetanus," *Deutsche Medicinische Wochenschrift*, 1893, No. 50.

rationale: substantially, it is rather only a modification of the immunizing methods hitherto prevailing. The specific bacterial products, on which the specific immunity depends, are stored up in an animal organism, where, by virtue of the reactionary processes following protective inoculations, they undergo a certain modification, which, however, *does not affect their inner specific nature.* These, then, are the bacterial products which, as so-called antitoxines, are transferred to other animals or to man with blood-serum or with the milk (Ehrlich) for the purpose of speedy immunization.

Hence, Behring's hypotheses respecting virus-destruction and the nature of the antitoxines are to be regarded as unproved and experimentally refuted. The subject is one of great practical importance, in relation to which all representations which overshoot the mark must be avoided at the outset, owing to the danger of disappointment.

REPORT OF A CASE OF SPLENECTOMY.

BY J. F. Y. PAINE, M.D.

My reasons for reporting this case are: the uncertain state of knowledge concerning the part performed by the spleen in the economy, and even its minute anatomy—experiments upon animals to determine its functions by removal having been entirely negative; the comparative infrequency of the operation; and the conflicting views regarding its results.

The operation has been more successful when performed on account of traumatic causes. Thus, Nussbaum states that in twenty-six examples of complete extirpation for injury of the abdomen implicating the spleen, sixteen were successful; and Ashhurst records twenty-one consecutive cases which terminated successfully. The result, however, has been less encouraging where removal has been resorted to on account of diseased states. Mr. Herbert Collier reports, in the *Lancet* (London), February, 1882, twenty-nine splenectomies for diseased conditions since 1549; sixteen were for leucocythæmia, all of which were fatal. Of the remaining thirteen cases, unassociated with leucocythæmia, eight recovered. Ashhurst furnishes forty-three cases of splenectomy for disease, obtained from various sources, thirty-one of which are known to have terminated fatally.

Case.—Mrs. H. L——, of French parentage; aged twenty-five; married; clear family history; has had three children; always lived in Liberty county, Texas, where malaria abounds, and has suffered from irregular attacks of malarial fever since childhood. Her health began to fail in June, 1890, attributed to frequently recurring and persistent attacks of fever. From that date to the time of coming under my observation, she represented that she had not experienced a comfortable day. A movable tumor was, at that period, discovered in the lower part of the abdomen, which slowly increased in size, and gave rise to constant pain, that was at intervals excruciating. In September, 1892, after a severe and protracted spell of fever and suffering, the tumor became fixed in the left iliac region, and pyrexia, in some degree, was rarely absent from then until after the operation.

Patient was admitted to John Sealy Hospital in November, 1892. She was wasted in health, anæmic, complained of constant pain in the region of the tumor, had no appetite, and suffered from depression of spirits; there was abnormal temperature, the variation ranging from 100° to 103° F. The temperature curves were not characterized by regularity or periodicity; on one day the highest point would be reached in the morning, on another in the afternoon, and again at some hour of the night. Quinine was freely employed, but without appreciable effect. The large boggy tumor occupying the left iliac region was immovable, and was diagnosed dislocated and adherent spleen. Tenderness on pressure, unremitting pain, constant febrile movement and disturbed nutrition excluded every ground to doubt that serious inflammatory action was in progress, and that the abnormal mass was responsible for the waning vitality of the suffering woman. The indications of treatment were equally clear. Her former professional attendants—skilled practitioners—had exhausted every therapeutic resource without benefit, leaving nothing to hope from drugs. Surgical intervention seemed to offer the only chance of relief, but the patient's condition forbade immediate operation, and the usual modes were, consequently, employed to improve her state. In spite of every effort to control them, fever and pain continued in modified degree, and sleep was interrupted. Despairing of accomplishing a more favorable condition, splenectomy was done January 14th.

Section of the abdominal wall was made along the linea alba, the incision being about four inches in extent. Hæmorrhage from the parietes was free, but promptly controlled by hot sponges and pressure forceps. The peritoneum, closely adherent to the abdominal walls, was opened, and the omentum found firmly glued to the spleen. This was detached and revealed extensive adhesions between the displaced viscus and the surrounding parts. It was adherent to uterus, bladder, coils of intestines, sigmoid flexure, and transverse colon. Adhesions were separated with great care, ligating those requiring it to prevent bleeding, and the organ was lifted by its lower end out of the abdominal cavity. The most difficult and critical part of the procedure was the tying and liberation of extensive vascular adhesions between its upper border and the transverse colon, which, being divided, permitted it to be raised entirely out of the cavity. The pedicle, which consisted of the splenic vessels, was now brought in view, and within access, was transfixed, double-ligatured with strong braided silk, and cut through. As an extra precaution against hæmorrhage, which is held to be the greatest danger of this operation, a separate ligature was securely placed upon each vessel of the pedicle. The ligatures were cut short and the stump was dropped back into the abdomen. The peritoneal cavity was thoroughly douched with warm Thiersch's solution and mopped dry by means of sponges. The external wound was closed with interrupted sutures, dressed with antiseptic material, and the abdomen supported by a flannel roller, as after ovariotomy. No drainage was employed. It is needless to state that the strictest rules of asepsis and antisepsis were followed throughout the proceedings. The after-treatment was the same as after every other abdominal operation. It is interesting to note that a small opening was discovered in the capsule of the spleen, from which issued a serous-looking fluid, that probably had some connection with the peritoneal involvement and the constitutional symptoms. The spleen weighed about three pounds, and presented the gross appearance of altered structure. I regret that I am unable to report its exact pathological changes.

The patient bore the operation admirably, reacting promptly from the slight shock, suffering comparatively little from nausea, and complained scarcely more of pain than before the operation. Her progress, immediately after operation and during convalescence, was uneventful. She sat up in the ward at the end of the third week, and returned to her home at the conclusion of the fourth. Her temperature declined to 99.5° F. on the second day following operation, and never reached 100° F. afterward, maintaining the normal standard subsequent to the fifth day. The pulse, which varied between 115 and 120 beats per minute before, dropped to 90 the second day succeeding the operation, and continued at the natural rate (70 to 80) after the sixth. Morphine, which was so urgently demanded, at intervals, for the relief of pain previous to operation, was not required after the second day following it. She felt better immediately after the operation, grew more cheerful, and improved without interruption. Diet and functions were regulated as in other cases of a similar character.

As much has been written regarding the ultimate effects of splenectomy upon the general health, I have thought it would be interesting to review this patient's progress from the date of operation to the present time, and even to exhibit her in person. Absence of appliances for counting blood-cells has prevented a critical microscopical examination of her blood, and as a consequence the report which follows is based simply upon common-sense and general appearances. To begin with, "faintness and persistent vomiting" did not follow the operation. There never was reason to suspect that "white blood-cells were increased at the expense of the red." It has been impossible to detect the slightest "enlargement of lymphatic glands," or the "development of accessory splenic nodules in the great omentum." There has been no appreciable evidence of "hyperæmia of the medulla of the long bones." No noticeable "enlargement of the thyroid gland" has occurred. There has been no sign whatever of increased "anæmia." At no time has there been apparent, either, the slightest indication of compensatory development, or disturbance of the economy, as a result of the operation. The patient has progressively improved in comfort, spirits, flesh, strength, and appearance since her spleen was removed. Extremely pale and emaciated before the operation, she now has healthy color and is plump, having gained thirty-five pounds in weight, and boasts of being a happy and useful woman.

Galveston, Texas.

Correspondence.

HAMMOND'S "CEREBRINE."

Editor MEDICAL AGE:

I have been quite interested in the clinical tests made with so-called "Cerebrine" injections in the treatment of neurasthenia. My attention was first called to the subject by reading Constantin Paul's paper "On the Treatment of Neurasthenia by Nervous Transfusion," in which appeared cases classed by him as neurasthenic chlorosis, typical neurasthenia, and ataxia; he claimed that all of these—eleven in number—were "either cured or greatly ameliorated." In another paper, presented to the Therapeutic Society, Paul reported fifty-two cases, mostly neurasthenic.

The most unsatisfactory cases to deal with are those amenable to intentional or unintentional hypnotic influence; and more "cures" and failures will be met among neurasthenics than any other class of invalids. Paul's patients are designated as "cerebro-spinal, cerebral, general, genito-urinary, cardiac, and melancholic neurasthenics"—a classification more imaginary than real—and all but five appear to have been cured or marvelously benefited.

Naturally these reports will be accepted only with the customary "grain of salt," bearing in mind the thousand and one nostrums that have "had their day," only to fall into desuetude.

Still more recently than Paul's, is the contribution of Moncorvo, of Rio de Janeiro, who claims to have secured generally favorable results by the employment of injections of sheep-brains in seventeen cases characterized by general enfeeblement following various diseases.

In this country we are justly inclined to be skeptical regarding these new methods, especially since no extracts have been offered that could stand careful clinical tests. I am persuaded none of the "organic extracts" in market are good for anything, for personal and careful trial of Hammond's "Cerebrine" in three well marked cases of neurasthenia gave no results favorable or unfavorable. The preparation employed was put up in a triangular bottle holding two drachms, and obtained directly from the Columbia Chemical Company, New York.—It is very expensive if nothing else, for which there certainly can be no good reason. It has a sweetish taste, slight odor of fresh brain substance, and seems to contain boric acid. The bottle was enclosed in a carton covered with a label identical with that on the bottle.

I prepared careful notes of these cases (and sent them to another journal, which did not care to publish but has not yet returned my manuscript). The effect in each case was absolutely *nil.* I gave a melancholic neurasthenic an injection of five drops into the deltoid every morning, but temperature and pulse taken before and after the injection showed no change; after a week's trial, the patient asked to have the injections discontinued because they seemed to do no good and were always attended by a smarting, painful sensation at the point of injection, persisting for about fifteen minutes. I daily gave myself like injections, but without any sensible result except this pain at the point of injection. My syringe was thoroughly sterilized in alcohol and boiling water, and the needle immersed in boiling water before using.—Another patient, a lady past eighty, very feeble, with loss of appetite, frequent palpitations, and insomnia, for several days ingested seven drops "Cerebrine" twice daily, without any tonic or other effect whatever.

Doctor Homer has lately been trying "Cerebrine" on a young man afflicted with "genital" neurasthenia, characterized by frequent seminal emissions and impotence, and under seven-drop doses injected into the arm every other day, thinks he has seen decided amelioration, but is not prepared to report definitely thereon.

It may be well to experiment further in this direction, but not with Hammond's "Extracts," for I believe them to be mainly inert; at all events, I think it would be necessary to employ very much larger doses than are advised by the Columbia Chemical Company. I wish that some of our enterprising pharmacists would find out just what are the processes employed by Paul and Moncorvo, and give us identical preparations. After the few tests made with Hammond's "Cerebrine," I feel like advising physicians to have nothing to do with it. Nor can I say any more of the preparation manufactured by Parke, Davis & Co., in large part according to Hammond's formula; the methods adopted by both are not those of Paul and Moncorvo. Paul says: "There exist in the liquid which I use certain soluble ferments which cannot as yet be chemically defined; at the same time, phosphorus has been found. As for the physiological action of the liquid on nutrition, we have here to do with an extremely complex question on which we are waiting for light."

M. Cetillon remarks that the solutiom employed by Paul *spoils* in the course of ten days, because prepared with glycerin and

water, without an antiseptic, and that if it be desired to insure conservation of the liquid, alcohol or cherry-laurel water should be added. Paul, in response, declares he has "sought to obtain, not a liquid which *keeps well*, but the very opposite, so that one may not be tempted to employ preparations that are not *fresh*."

This is sufficient evidence that the liquid which Hammond markets as "Cerebrine" is not identical with the solution vaunted by Paul and Moncorvo.

Since the foregoing was written I have seen the contribution of Althaus in the *Lancet* (London), December 2d, 1893, who instituted experiments with sterilized extracts of brain and spinal cord prepared from healthy young animals, and who likewise gives a clear and succinct account of the mode of manufacture, as follows:

A healthy rabbit is killed by the inhalation of chloroform; the spinal cord is rapidly dissected out under antiseptic precautions; then to three grammes of cord is added 3 C c. glycerin and an equal quantity of five-per-cent. carbolic solution, when the whole is intimately mixed and allowed to stand for a day. On pressing it off, the product is found to measure 7.2 C c. The brain is treated in the same way and in the same proportions. The extracts thus obtained Althaus denominates "Myaline *alpha*" and "Cerebrine *alpha*," respectively; neither has shown any perceptible change after being kept for upwards of three months in stoppered bottles in a cool place. These are employed hypodermatically in this crude state; a good initial dose is five minims. The physiological effects in persons of average health are "feeling of increased nervous energy and buoyancy and greater capacity for physical and mental exertion." Althaus claims to have administered with decided benefit in numerous instances of neurasthenia, chronic degeneration of the spinal cord, as locomotor ataxia, and various forms of hemiplegia, paralysis agitans, and epilepsy; but he admits they are in no sense specifics, but only adjuncts to other nerve remedies.

The name "*Cerebrine*" is so convenient and is naturally so applicable to this product of animal brains that no firm should be allowed to monopolize it. Althaus says of Hammond's so-called "Cerebrine": "Some of the physiological effects described by Hammond are probably owing to the alcohol which is a constituent;" but there does not appear to be *any* alcohol in Hammond's preparation.

E. P. HURD.

Newburyport, Mass.

THERAPEUTICS OF THYROID IN EDINBURGH.

Editor MEDICAL AGE:

DEAR SIR:—It is with pleasure that I recall my promise made to you to write you a few lines at any time that anything interesting should come under my notice while visiting some of the European hospitals. I am at present "doing" the Edinburgh clinics, as faithfully as I can, but the very wealth of the material here is, to say the least, embarrassing, when one is not a bird — as an Irish M.P. said here recently—so as to be in two places at once.

I attended the local branch meeting of the British Medical Association that was held here last week. It is not my intention, even were I able, to give you a detailed account of the many interesting cases that were presented at the principal session held in the large surgical theatre of the Royal Infirmary —there is one point only to which I would beg to draw attention. The point of interest in the meeting was in connection with the use of thyroid extract and the many varied channels of usefulness which appear to be opening up for its exhibition. There were some very remarkable cases shown by Doctor John Thomson of sporadic cretinism, with photographs—the "before and after" using being well and forcibly illustrated with the living subject in view. One of these, a dwarf girl (!) of 39 years of age, who had been a perfect idiot before treatment began, was, to the eyes of all present, sensibly endowed with intelligence—it could be seen beaming out, as it were, in her face; she was beginning to learn her letters, and she could now be trusted to run errands: she was virtually a new creation. The medical profession had, however, been educated up to believe that these results were possible in such cases, and consequently no great amount of surprise was expressed at them. It was a curious study to observe the change in the spirit of the meeting from this onward. When cases of psoriasis were exhibited by Doctor Allan Jamieson successfully treated by thyroid extract after having resisted ordinary routine treatment, interest began to be aroused; and when the same gentleman exhibited a most remarkable case of ichthyosis that was illustrated comparatively by colored drawings, showing the patient's condition on admission, interest changed almost to enthusiasm as he informed the meeting that thyroid extract was again the therapeutic agent to which the amelioration was due. The ichthyotic condition was being relieved in patch-work areas of normal epidermis of gradually increasing dimensions, so that it

was permitted to compare on the patient simultaneously the old condition with the new; the only thing I can compare in appearance with the ichthyotic parts yet remaining is the bark of a tree—it was certainly dark enough in color, and was about half an inch thick. Questions then began to pour in asking information regarding the mode of exhibition of the remedy, dose, etc. But this was not all: there was also exhibited by Doctor N. Walker a case of lupus after treatment by thyroid extract; condition before treatment was illustrated by a colored drawing, so there could be no doubt as to the beneficial results. A case of lupus was also exhibited—I forget by whom—in which thyroid treatment had proved ineffectual, so that it is yet too early to define the limitations of its usefulness, but it was the expressed sentiment of the meeting that it had already more than established its claims for recognition as an article of the materia medica. The preparation of the thyroid that had found most favor in administration was a compressed tablet representing five grains of the gland in its natural condition; one or two of these were given daily until promise of effecting improvement was noted, then the dose gradually reduced—one of the cases shown doing excellently on one tablet every second day.

GEO. SUTTIE.

34 Clerk St., Edinburgh, Scotland,
Feb. 14th, 1894.

TWO EXTREMES.

Editor MEDICAL AGE:

I was recently called to attend a lady, aged thirty, in confinement, and in three hours she was delivered of a healthy male child weighing ten pounds. To my astonishment, however, I discovered the umbilical cord was of abnormal character such as I had never before seen. It measured forty-one inches in length and was one inch in diameter.

I tied the cord, and, supposing I had made it secure, separated the infant from the mother, but before I left the lying-in room I noticed the child was bleeding profusely from the umbilical stump. I threw another ligature about it, after which the infant did well until the stump sloughed away; then I found a bad case of rupture. In spite of all I could do, six months elapsed before complete recovery in this regard took place.

On a subsequent occasion I was called to attend a French lady, aged forty-two, in confinement, who was already the mother of fourteen children; she was large, fleshy, and loosely built, weighing about 250 pounds. Upon examination I could not have said she was even pregnant, and, indeed, I had grave doubts in the matter, but was careful not to express them. After a few inquiries, at the same time studying the actions of the patient, who appeared as women under such circumstances usually do, I again examined, this time introducing the hand into the vagina—which was accomplished without difficulty—completing abdominal palpation by means of the other hand upon the external abdominal wall. I now found the os well dilated and seemingly no lower than the fundus should be, and immediately posterior to the latter. By lifting the os and bearing back upon the fundus from the outside, the child was born in a few seconds. The woman had only one pain. Following the child, there was a gush of amniotic fluid, which, to estimate moderately, could not have been much less than four gallons; it flooded the bed, the floor, and even the medical attendant did not escape.

In this case the cord was only eight inches in length and one-quarter inch in diameter, and tore out of its attachment to the infant during the birth of the latter. Happily Providence was on my side, as the infant was born dead.

Can anyone offer a probable cause for these uncommon occurrences?

Sincerely yours,
JAMES W. SQUIERS.

Churubusco, Ind.,
February 1st, 1894.

POISONING BY HOME-MADE WINES.

The *British Medical Journal* says: "On this subject we have received rather a startling communication from Mr. G. A. E. Roberts, of Twyford, Hants. He has had over thirty cases, during the last twelve months, of lead poisoning from drinking home-made wine and beer, brewed in glazed earthenware pans. He is sure that this only represents about half of the cases, as many are not sufficiently ill to seek advice. According to Mr. Roberts, if other country districts suffer in the same proportion, there must be somewhere about 50,000 cases a year in England. He points out that if the use of lead in glazed pans was prohibited, or they were marked in some way to show that it was unsafe to brew in them, a great amount of sickness would be prevented. Notices might be posted up in villages calling attention to the danger of using these vessels for such purposes."

Society Meetings.

WAYNE COUNTY MEDICAL SOCIETY.

February 15th, 1894.

Doctor Wyman in the chair.

The meeting was devoted to the discussion of "Consumption as a Disease Dangerous to the Public Health," a paper presented by Doctor Henry B. Baker, Secretary of the State Board of Health.

Doctor Samuel Bell was unable to accept as a fact that the bacillus was the entire cause of consumption, but thought that the time was not far distant when patients must be segregated. Tubercular patients are at present found in jails and asylums without any provision for their isolation. He cited a case where consumption had spread from three workmen in an electrical works until thirty-three out of thirty-eight of the employés were infected. The profession are slow to accept the theory of contagion, and consequently the Board of Health will find it hard to educate the people.

Doctor A. Bryan thought it was a good idea for the authorities to examine the excreta and restrict patients suffering from this disease.

Doctor E. L. Shurly said he ranked among the agnostics on this subject; he was confronted with want of evidence, and consequently with doubts. We must recognize two distinct forms of consumption, and varieties of each form. Consumption is contagious by inoculation, but so is tetanus. Erysipelas is also contagious if an abrasion of the skin be exposed to the poison, but we have an idiopathic form. He was surprised at the very small number of people who contracted consumption by constant attendance upon the sick. Some of the supposed cases of infection may be merely coincidences, and the same coincidence prevails in other diseases—as dysentery and pneumonia. Assuming that the sputum is the source of infection, does not explain how animals who do not expectorate take it. He had blown the dried tubercular sputum into the cages of monkeys three times a day, and but two out of six were affected; the sputum had been artificially dried, as the actinic rays of the sun are supposed to have a germicidal effect. If these animals are under bad hygienic surroundings, they will all die without exposure to the infection. Animals will contract tuberculosis from injection of various substances not containing bacilli. These experiments had made him skeptical. He believed that bacilli may be of internal origin, and that in five years there will be great changes in our ideas on this subject. We should coöperate with the Board of Health, but we have also a duty to our patients. When we can be sure that tuberculosis is contagious we will coöperate with the Board. He doubted whether we knew enough to go so far as coercive legislation. He had never known of a single person contracting the disease in a hospital, but attendants are liable to have phthisis from confinement.

Mr. Louis Hogrefe, Milk Inspector, gave the source of the milk supply of Detroit, and maintained that the inspection of milk was a factor in preventing the spread of disease. He ascribed the immunity of the Chinese to the fact that they never drink water until it is boiled. He recommended the boiling of milk as a means of preventing infection.

Doctor S. H. Goodwin cited several cases of consumption in a family that had always enjoyed immunity until one after another had been infected by association with a tubercular patient. He believed that bad hygiene had a great effect in causing the development of phthisis, and considered that enteric fever was a fruitful cause.

Doctor E. W. Jenks, a firm believer in the germ theory, thought that the consensus of opinion was in favor of the contagiousness of the disease.

Doctor L. E. Maire believed that there was a prevailing desire among physicians to back up the Board of Health in its efforts to suppress the disease.

Doctor Cleveland, of Chicago, was impressed with the belief that the occurrence of bacilli was coincident with the occurrence of the disease.

Doctor E. B. Smith said that one of the most important points brought out in the paper was the education of the people to the dangers of consumption. He believed that the Board recognized that physicians desired to assist them. Attention should be paid to the discharges from suppurating cavities, as well as to sputa, as many of them were tubercular.

Doctor E. T. Milligan asked if it was the intention of the Board of Health to prohibit consumptives from marrying. If that could not be done, the Board of Health would be deprived of one of the greatest means of preventing the perpetuation of consumption.

Doctor McLeod, Health Commissioner, explained that the local Board of Health acted on the recommendations of the Health Commissioner, and he was anxious to hear an expression of opinion on this subject by the profession. During the past four months there had been 491 deaths from consumption, and only 183 from diphtheria and scarlet

fever, in Detroit. While isolation and disinfection were practicable in consumption, quarantine could not be carried out.

Doctor R. H. Honner suggested that while experiments were being carried on all over the world on animals, it would be as legitimate to try the measures recommended by the Board of Health as an experiment, and according as the results either verified or disproved the assumption of contagiousness, the methods adopted could be retained or abandoned.

Doctor McLeod stated that the Board of Health had constructed a building for laboratory purposes, where the examination of sputa, false membrane of diphtheria, etc., was carried on.

Doctor Baker defended the action of the State Board of Health by citing the decrease in typhoid fever since disinfection of the ex creta had been practiced.

Doctor Smith moved, seconded by Doctor Goodwin, that hereafter consumption and other diseases due to the *Bacillus tuberculosis* shall be included in the list of diseases dangerous to the public health, of which notice should be given by householders and physicians to the local health board as soon as such disease is recognized. Adopted.

Doctor McLeod thought that even those who did not believe in the bacillary origin of tuberculosis would believe in the hygienic measures adopted by the Board.

Doctor Donovan thought it was better to improve the condition of the houses than to placard them.

Doctor Jenks said that if the cases were reported the hygienic conditions of the houses could be improved by the Board of Health.

R. H. HONNER,
Secretary.

ANOTHER "CANCER CURE" LOSING GROUND.

The *Medical News* has been paying its respects to the notorious Wm. T. Stead—editor of the *Review of Reviews*—now perambulating America, giving expression to his peculiar views and at the same time advocating quackery of various kinds on the lecture platform. It will be remembered he was one of the strongest promoters of the Mattei cancer-cure humbug, whereby plain water purporting to be electricized was sold at most exorbitant prices to credulous dupes. *Food and Sanitation* states that the income of the representatives of the Count Mattei remedies was for a time at the rate of a half-million dollars a year.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., MARCH 10, 1894.

Editorial.

AN APOLOGY.

We offer our readers an apology for publishing in the last issue of the MEDICAL AGE (page 108) as original an article which has also appeared in three other journals.

The paper in question was sent us by a third party, who was not familiar with our rule in such matters.

It is not the intent of the MEDICAL AGE to accept any article for the "Original" columns that has appeared, or is to appear, elsewhere.

THE PROOF OF THE PUDDING.

We feel that most, if not all, of our readers must be heartily tired of any reference to "Animal Extracts" (so-called) or their author; likewise that neither longer possesses any direct interest for the better portion of the medical profession or the intelligent lay public. Yet, recent events have come to light which certainly demand attention, in that they show the original contention made in this and other journals regarding the character of these products (based upon the evidence afforded by the products themselves and by the advertising connected therewith) to be emphatically true, viz.—that they were introduced for purely *commercial* purposes; and that the attacks that have been made upon them are not, as the great "Retired" and his friends claimed, a form of persecution.

It will be remembered that on the 28th day of January, 1893, there appeared in a New York publication an article by said "Retired" lauding a product he termed "Cerebrine," which, it was claimed, required six months of constant maceration to perfect, with the proviso that one year was much better. The same article, or modifications thereof, appeared in various journals throughout the United States and Canada, and even found place in numerous lay publi-

cations.* In these articles incidental allusion was made to other so-called "Extracts," one of which required *eight* months' maceration.—It is at once evident to any practical physiologist or pharmacist that the declaration of such prolonged maceration admitted of but one of two conclusions: Either the author of these products was grossly ignorant of physiology and pharmaceutical processes, or these claims must have been advanced through personal considerations solely.

Naturally this paper (and others which subsequently appeared), obtaining place in a journal which purported to be a scientific periodical, gave the communication weight which its author could not alone have secured. In consequence, and in good faith, Messrs. Parke, Davis & Co. began the manufacture of "Cerebrin," giving the original author due credit therefor, but modifying the process in the matter of maceration, well knowing that if any therapeutic property rested within the organs from which these extracts were derived, a much shorter period would thoroughly exhaust it. This firm of manufacturing pharmacists was doubtless actuated by a desire to be foremost in catering to the medical profession, but they had scarce entered the field when they discovered not only their own product but also that bearing the name of the great "Retired" was inert; and thereupon they withdrew from the field, exhibiting a degree of honesty which certainly has not been emulated by the Company presided over by the ex-Surgeon-General. It is unnecessary to remark in this connection how the evidence on being brought forth that the so-called "Extracts" were inert, led to their being sophisticated with Nitro-glycerin; this has been abundantly aired in the *Journal of the American Medical Association*, *Medical News*, MEDICAL AGE, and various other publications.

About the time Messrs. Parke, Davis & Co. gave up the manufacture of "Cerebrin," also came the announcement that the sole right to manufacture and market "Animal Extracts" rested with the Columbia Chemical Co. (formerly the Health Restorative Co.), of which the great "Retired" was the principal stockholder, its president, business manager, advertising agent, etc.; also that these "Extracts" were trademarked along with several other products put forth by the same concern, including "Febricide," "Natrolithic Salt," "Restorative Wine of Coca," etc.—In this connection we may mention something of a joke upon the erudite "Retired," who arrogates to himself such extraordinary physiological, botanical, and chemical knowledge, including the possession of a laboratory: the labels on the bottles of "Restorative Wine" originally exhibited a branch not of *Erythroxylon coca*, but of the Cacao tree (*Theobroma cacao*), an error a corner druggist would have hardly made.

And now, too, was derived the extraordinary information that the supposed scientific journal of New York was acting in the interests of the "Retired," and soon it published other articles by the same individual upon "Animal Extracts," and finally, to divert attention from its own delinquencies, indulged in a tirade of abuse against the erudite editor of the *British Medical Journal*. Later has come the evidence that the same New York journal is being prostituted in like manner in the interests of other individuals desirous of proprietary renown, since within one year it has opened its columns to laudation and advertising of at least three, and perhaps four, other preparations of like ilk.*

Now after all the boasting of the "Retired" and his friends as to the legitimate character of his products, which he claims to have invented—but which in fact appeared in France long before the appearance of his article—he has apparently thrown off the mask and boldly entered the general market, and advertises his wares as other products of like character are advertised. In evidence of this we here reproduce in *fac-simile* an advertisement from the *Macon Telegraph*, Macon, Ga., of January 2d, 1894.

*That these articles were disseminated broadcast to medical journals is evident, and we refer our readers to an excerpt from the *Denver Medical Times*, published on page 732 of the December 11th, 1893, number of the MEDICAL AGE.

*The MEDICAL AGE at the present moment has in possession a letter from a medical man of another State, who desired to put on the market a proprietary remedy, and so sought our influence, and who likewise (truthfully or untruthfully, as the case may be) informed us that he had made arrangements to publish an article on his remedy in said purported medical and scientific journal which gave to the world the first advertisement of "Animal Extracts."

ANIMAL EXTRACTS

PREPARED ACCORDING TO THE PROCESS AND UNDER THE SUPERVISION OF DR. WILLIAM A. HAMMOND.

CEREBRINE, the sterilized extract of the brain of the ox, contains the substance required by the brain for its nutrition and normal action. It is possessed of great power, its effects being experienced in a few minutes, and continuing in a modified form for several days.

It is of singular efficacy, as—

1st, A Resistant to the Advances of Old Age.

2d, In Nervous Prostration or Neutralism.

3d, Hysteria.

4th, Nervous Dyspepsia.

5th, Hypochondria and Mild Forms of Mental Derangement.

6th, Functional Brain Disturbance due to defective nutrition of the organ.

7th, Temporary or Long-Continued Brain Exhaustion resulting from intellectual or emotional strain. A single dose will, in cases of the first-named condition, frequently act as a complete restorative of the nervous system.

8th, Insomnia, resulting from over mental work.

CARDINE, the sterilized extracts of the heart of the ox, contains the substance, both nervous and muscular, required by the heart for its nutrition and normal action. It is a powerful heart tonic, and exerts its influence within a few minutes after its administration.

It strengthens the pulse and lessens its frequency in those cases in which the heart's action is feeble and frequent, causes the disappearance of intermissions and other irregularities in the strength and force of the heart beat, and materially increases the blood pressure, so that it acts upon the kidneys as a diuretic.

It is useful—

1st, In Functional Weakness of the Heart resulting from general or local nervous debility.

2d, In those Organic Diseases in which the Action of the Heart requires to be strengthened or Rendered Regular.

3d, In Dropsy due to Weak Heart, consequent diminished blood pressure, and a decreased action of the kidneys.

4th, In those Cases of Bright's Disease in which the Action of the Kidneys requires to be increased.

MEDULLINE, the sterilized extract of the spinal cord of the ox, contains the substance required by this organ for its nutrition and normal action.

It is of great benefit in functional and organic affections of the spinal cord, rapidly effecting cures in the former, and even in the latter, where the morbid process has not advanced beyond the first stage, arresting their further progress and producing great amelioration in all the symptoms.

MUSCULINE, the sterilized extract of the muscular tissue of the ox, contains the substance required by the muscle for their nutrition and normal action. It is a restorative of great value in muscular weakness in the cases of persons who have recently undergone severe muscular exertion and who are more or less exhausted by the strain to which they have been subjected.

In cases of convalescence from severe diseases, or in others in which the system requires to be built up, it is superior in its action to beef extracts or beef tea.

The above named and other extracts, Testine, Ovarine, Thyrodine, etc., are now for sale by druggists generally and by the manufacturers, COLUMBIA CHEMICAL CO., 1704 G Street, Washington, D. C.

Appeals like the foregoing are made to the laity generally throughout the South in the columns of the daily press, among others notably the *Chattanooga Daily Times* of January 19th, 1894.

In the *New York Press* of February 15th appears an advertisement of "Cerebrine," offering it at the extremely moderate price of $2.50 per two-drachm bottle; also in the same lay daily, under date of February 20th, appears an advertisement of "Animal Extracts;" and the former assures the public that it is prepared "according to the process and under the supervision of" the great "Retired," and the latter that it is prepared "according to the formula of," etc.; likewise that both are panaceas for ills to which human flesh is heir.

Further, in the Southern press is added the statement that "Cerebrine," "Cardine," "Medulline," "Musculine," "Testine," "Ovarine," etc., are for sale by "druggists generally" as well as by authorized agents.

Continued comment would be superfluous. We may, however, call attention in this connection to a communication in our Corre-

spondence columns from Doctor E. P. Hurd, who appears to have experimented with "Cerebrine" without effect, and who notes incidentally the results purportedly accruing with "Animal Extracts" in the hands of Constantine Paul, Grieger, Moncorvo, and Althaus.

Further, it will be observed that Constantine Paul and all others declare there is nothing in the processes of the great "Retired," and that best results have been gained by "Extracts" prepared by quick methods such as the president of the Columbia Chemical Co. condemns; and that long maceration is likely to be productive of septic decomposition.

We may also add that Doctor Homer, of Newburyport, Mass., has recently tried "Cerebrine" (C. C. Co.) in three marked cases of neurasthenia with sexual impotence, using a bottle on each patient, the results being *nil.*

CONSISTENCY.

A "yaller-kivered" contemporary published in New England, and possessed of a most Wile(y) editor, under the heading of "Peculiar Methods," in the March issue discusses editorially such proprietary preparations as "Santal Midy," "Quinia Laroche," "Vin Mariani," etc., and further on "goes" for them "hammer and tongs."

We consider the criticism embodied most just, and cordially indorse the same. But is not this display of righteous indignation, coming from such a source, just a trifle ludicrous, since only a little while back the same editor was one of the loudest of howling champions of the only "Great Retired" and his "animal extracts;" indeed, this editor could "see no guile" in either the "extracts" or their proprietor and inventor (?). He also remarks:

It is a question whether any firm does not violate the law by putting a preparation of wine and coca on the market for promiscuous use.

Could not Brother Wile(y) give us a screed on "Restorative Wine of Coca," a trademarked preparation put forth by the only "Great;" and also on said "animal extracts," which have managed to secure an amount of free advertising from the medical press—Br'er Wile(y)'s journal included—that represents thousands of dollars; and now having "worked" the medical journals to the utmost limit, the cream of the advertising all goes to the profit of the lay and daily press!

Just one little "song and dance" on this subject, Br'er Wile(y), and we will say no more about it.

EDITORIAL NOTES.

Death of Billroth.—

At the age of 65, Theodor Billroth departed life February 6th at Abbazia, Austria. His death is a shock to the entire medical world; especially will he be missed by English-speaking students seeking Vienna for pathological knowledge. No one man in this age or era has done so much for pathology, and to him alone is the credit of reducing this branch of research to an exact science, and the popularizing of a subject previously deemed dry, unprofitable, and abstruse. His writings all, no matter in what language, were characterized by conciseness, clearness, and elegance of diction.

Enlarged.—

The *Indian Medical Record* has been enlarged to the same size as the *British Medical Journal.* The *Record* has now its own printing office, thoroughly furnished with modern machinery and plant, which is not only evidence of gratifying success, but that the worrying details of outside contract printing are obviated, and the editors and managers are in position to do ample justice to the "get-up" of the journal and to give the best possible satisfaction to contributors.

Presentation.—

The officers of the Medical Service of India, on the evening of December 28th last, presented Doctor Wallace, the editor of the *Indian Medical Record*, with a handsome gold repeater watch with chain and charm, and an address, as a token of their appreciation of his efforts in medical journalism. The address was illuminated on vellum and enclosed in a beautiful gold-lined silver casket.

Items and News.

Amok and Sakit-hati among the Malays.—

Doctor W. Gilmore Ellis, superintendent of the Government asylum at Singapore, has published an article telling of certain abnormal conditions of mind among the Malays. The meaning of *amok* is a furious assault; from this word the English term "to run amuck" is derived. A Malay who runs *amok*, runs armed through the most crowded street or village, stabbing right and left at man, woman, or child, relation, friend, or stranger. Many exciting causes of this homicidal passion have been observed: domestic troubles, grief at the death of a near relative, sight of blood, brooding over real or imaginary wrongs, fear of death (as in a foundering ship), shame and disgrace (such as being considered a coward or being imprisoned), and especially malarial fever. *Amok* is considered among the Malays a kind of suicide. A man, from some cause or other, considers life not worth living, and wishes to die; suicide being a most heinous sin according to the Mohammedan religion, he *amoks* in the hope of being killed. The writer considers *amok* a form of impulsive insanity, a paroxysm of acute mania allied to post-epileptic mania. The patient has no remembrance whatever of any act of violence.

Another peculiar condition of mind which the Malay is subject to in greater or less degree, is called "*sakit-hati*." The literal meaning of this term is heart-sickness. The sufferer sits down and broods over his wrongs, or supposed wrongs, with revengeful feelings, and is altogether filled with the pain of grief. They do not appear to be really insane, and, as a rule, quickly recover; but sometimes it has been found necessary to send them to an asylum. They remain in the condition described for periods varying from a few hours to a few weeks, but rarely longer than four or five days. At the time of the attack their mental activity seems to be impaired and the memory is also slightly affected. If it were possible to get information as to the patient's condition shortly before the outbreak, Doctor Ellis thinks there would always be found some divergence from the man's usual habits, and in some cases marked peculiarities. Malays say that the man who runs *amok* always suffers from *sakit-hati* first.—*Journal Mental Medicine—Journal Nervous and Mental Diseases*, October, 1893. (If the last statement of the Malays be true, the two abnormal mental conditions above described would resemble the picture of a complete attack of *folie circulaire;* the only difference being that in the first or melancholy stage the grief is mixed with revengeful feelings.—A. W. H.) —*Occidental Medical Times*, January, 1894.

A Doctor's Trouble.—

"My dear fellow," said my doctor to me, "you have no idea what we have to put up with. If I call to see a patient frequently, I am 'trying to run up a bill;' if I don't, 'it is shameful neglect.' If I manage to get to church, and am called out, I hear afterward, 'Working the Bob Sawyer dodge on Sundays, eh, Doctor?' If I am so busy that I cannot go, I am sure to be asked, 'How is it that you doctors are all atheists?' If my wife calls on people, 'it is because she is trying to get patients for me,' but if she doesn't, it is because she is 'too stuck up.' If I cure a patient quickly—get credit, you say? Oh, dear, no!—the patient 'wasn't half as bad as the doctor tried to make out; why, he was quite well in a week;' but, on the other hand, should the case develop serious complications, 'Ah! the doctor never understood the malady; in fact, he was worse when he had been taking the medicine a week than when we called him in.' If I suggest a consultation, it is only because I don't know what is the matter; if I pooh-pooh the idea as unnecessary, I am 'afraid of showing my ignorance.' I am expected to, so to speak, cast a horoscope on a baby's life, and tell its mother what its ailments will be. If I can't do that, I 'cannot possibly know very much.' I am expected to foresee all the 'ills that flesh is heir to,' six months before they come. I once lost a patient whom I had treated for influenza, because I did not foretell an attack of rheumatism which came on three months later. In all cases, if they get worse, the fault lies in the medicine. If I send in my bill, they say, 'He is in a terrible hurry for his money;' if I don't, it is 'so unbusinesslike.' 'But we get well paid?' do you say. My dear sir, if I received payment for one-half I do, I should die from shock."—*Medical Record.*

Futile Legislative Interference.—

The futility of legislation designed to regulate private or personal affairs, and to take care of some particular class in the community, is a matter of abundant demonstration, and the artificial-butter legislation affords one of the latest illustrations of it. In Minnesota the manufacturers of butter from milk had enough influence with the Legislature to procure the enactment of a law that all butter made from fat should be colored pink. This is the same as though the *hand weavers* had procured a law requiring that all cloth woven on a *power loom* should be punched

full of holes. The public taste so imperatively insists that butter should be yellow, that the honest farmers who protest against the adulteration of food by other people habitually dye their butter to suit the consumer's eye. We wish we could believe that this coloring matter were the only adulteration the dairymen resort to; there is, unfortunately, evidence that the oleo they protest against openly they buy in secret and mix with their creamery butter. In this State the farmers did not have quite enough influence to procure so absurd a law as that of Minnesota, but they went as far as the United States law would permit in the way of direct prohibition of the sale of oleomargarine and butterine—articles as wholesome, when properly made, as lard or as dairy butter itself. A law to prohibit the importation of these articles from other States would have precipitated a conflict with the Federal authorities, so the Legislature prohibited their sale except in the "original packages," which are protected by the Federal Constitution. The Empire State treats oleomargarine as Iowa treats intoxicant liquors.—*New York Journal of Commerce and Commercial Bulletin.*

Hammond of Cerebrine Fame.—

Within the past year William A. Hammond has appeared in a new rôle. The Columbia Chemical Co. of New York has been started and it turns out that he is its President, Treasurer, General Manager, and chief stockholder, in short a sort of "Poobah" to the whole concern. The purpose for which this company was formed is the manufacture of "Cerebrine," "Testine," "Cardine," "Medulline," etc., and if there are any other "ines" not yet manufactured they will doubtless be on the market, duly labeled, in a short time. The MEDICAL AGE has done the profession good service in its exposition of these proprietary medicines. It seems strange that a man of Hammond's ability, and who has been honored by the profession as few men have, should in his old days spoil a reputation, earned by years of hard, earnest toil, and turn out to be a modern Paracelsus. The profession should give Hammond to understand that his hitherto exalted position will be no bar to his receiving the condemnation he so justly deserves.—*Toledo Medical Compend.*

Taxing Proprietary Medicines.—

The Ways and Means Committee of the House of Representatives has recommended the restoration of the tax on proprietary medicines. If in addition to the tax the printing of the ingredients on the label would be required, much could be accomplished in the interest of the people and the profession. In this way this subject is regulated in European countries. Some of the preparations may have value and can be used by the public with safety, while many are not alone dangerous, but worthless, and their sale is dependent entirely upon the fraudulent claims to cure everything—in fact, if this advertising was stopped, they would find no sale, and just in proportion as it is pushed are they sold. They appeal to the hopes and fears of the sick and afflicted, and it is the obtaining of money under the worst kind of false pretenses—really nothing more or less than robbery. While Congress is engaged in this business, would it not be well to tax the itinerant practitioner and vender of nostrums, with show-accompaniments? They go from one State to another, and the question naturally arises whether this is not one of inter-State commerce that should be regulated by Congress. It is the policy of this class of frauds not to stay too long at one place, nor to return at too short intervals to the same place, for the reason that it takes time to secure a fresh crop of dupes.—*Medical News.*

A Gallant Army Surgeon.—

The whole profession will feel pleased to know that Her Majesty the Queen has conferred upon Surgeon-Major Owen E. P. Lloyd the Victoria Cross. The act of bravery which won him this distinction is thus described: During an attack upon the Sinia Fort by Kachins on the 6th of January last year, Surgeon-Major Lloyd heard that his commanding officer, Captain Morton, who had left the fort to visit a picket about eighty yards distant, was wounded. He at once ran out to the wounded man under a close and heavy fire, accompanied by a native officer. On reaching Captain Morton, Surgeon-Major Lloyd despatched the native officer for assistance, and remained with his patient until assistance arrived; by the help of seven men the wounded man was carried back to the fort, where he died a few minutes afterwards. The enemy were within ten or fifteen paces, keeping up a heavy fire all the time that Surgeon-Major Lloyd and his men were attending to Captain Morton, and four men were killed round him.—*Medical Times and Hospital Gazette.*

Crude Cocaine Not a Medicinal Preparation.—

Crude Cocaine is not a medicinal preparation. It is used in the manufacture of cocaine wines, which are generally proprietary preparations, and of oleates, but is not

employed in filling prescriptions. Its occasional use, for the sake of economy, upon the surface of the skin for surgical purposes, or for dental purposes, does not change the case. Neither does the fact that crude Cocaine is extracted from the leaves of the plant coca, by the aid of diluted alcohol, according to the decision of the United States Circuit Court of Appeals, in the case of Hirzel *vs.* United States (rendered Dec. 5th, 1893), constitute it a medicinal preparation in the preparation of which alcohol is used, within the meaning of the tariff act of Oct. 1st, 1890. Under that tariff it is, therefore, dutiable at 25 per cent. *ad valorem*, rather than at 50 cents per pound.—*Journal of the American Medical Association.*

The Grand Old Man of Medicine.—

The *Medical Press and Circular* gives a new title to the "Autocrat of the Breakfast Table" in the following:

The "Grand Old Man" of Medicine seems to be Doctor Oliver Wendell Holmes. The College Club, of Boston, recently gave a reception in his honor, and about five hundred persons were presented to him. He received them as he sat "in a laurel-decorated chair under a bower of palms." During the course of the proceedings Doctor Holmes recited "The Last Leaf," "Dorothy Q.," and "The Chambered Nautilus," all of which must have been intently listened to. Truly, we have no one in this country of similar standing, belonging to the profession, who could perform such a feat.

Digestion in Infants.—

The act of sucking, in itself, excites peristaltic action, and secretion of the digestive fluids (Spallanzani, Brown-Séquard). The digestive canal is a continuous tract; the sucking action excites the function of the salivary glands, and arouses that of the others.—*Abram Jacobi, in "Intestinal Diseases of Infancy and Childhood."*

Epidemics in England.—

Birmingham has been passing through an epidemic of smallpox, that, however, is now somewhat abating. During the last two weeks of November there were 263 cases; and at the same time at the Infectious Hospital 335 cases of scarlet fever.

Consolation.—

Nitro-glycerin by any other name is just as dangerous, and Doctor W. A. Hammond, retired, is not the first adventurous experimentor blown up by it.—*Journal of Arkansas State Medical Society.*

Book Reviews.

TREATMENT OF DISEASES OF THE STOMACH AND INTESTINES. By Doctor Albert Mathieu. Cloth; 8vo; pp. 294. Price, $2.50; flexible leather, gilt top, $3.25. William Wood & Co., New York.

This is volume two of the Medical Practitioner's Library, and a very handsome evidence of the new departure of the publishers in the production of the convenient so-called "libraries" for physicians. The work presents a general summary of the therapeutics of diseases of the stomach and intestines. The facts brought forward of recent years, which have considerably changed the aspect of gastro-intestinal pathology, and the advances made in the chemistry of the stomach and intestines, are here clearly set forth, in connection with considerations leading to the line of treatment advocated by the author.

The first portion of the volume is devoted to semeiological technique, in which are described the chief methods essential for the examination of the contents of the stomach, of the fæces, and of the urine, looking to the diagnosis of dyspeptic conditions. The second part is devoted to a general study of diet in cases of gastro-dyspepsia. Then follows the most important section, devoted to general symptomatic therapeutics, where are arranged, in logical and natural order, the clinical definitions and treatment of different dyspeptic states. The volume concludes with the therapeutics of diseases of the stomach and intestines, and though this appears very brief it will be found that a large proportion of the material properly coming under this head has been carefully handled in connection with other matters in the earlier portions of the book. In conclusion, it may be added the author's standing in the profession gives this volume an authority that is most welcome in the study of all classes of diseases, regarding which so much from time to time has been written and so very little said.

THE NATIONAL DISPENSATORY. By Alfred Stillé, M.D., LL.D., John M. Maisch, Ph.M., Phar.D., Charles Caspari, Jr., Ph.G., and Henry C. C. Maisch, Ph.G., Ph.D. Leather; imperial 8vo; pp. 1910. Price, $8.00; cloth, $7.25; thumb-letter index, 50 cents additional. Lea Brothers & Co., Philadelphia.

Since its first appearance fifteen years ago the National Dispensatory has been recognized as combining authoritative accuracy, completeness, convenience, and reasonableness in price. In no previous edition have

the changes and improvements been so great. The new United States Pharmacopœia was placed at the command of the editors, and the sweeping changes in the former thoroughly incorporated. Likewise the latest editions of foreign pharmacopœias have been searched for all material of value, and ample space has been given to the new synthetic remedies and the unofficial preparations now so largely employed.

The volume is rich in chemical and pharmaceutical information, with data, formulæ, and tables gathered from all official sources —many new tables of value having been inserted, and all weights and measures are given in the ordinary and metric systems. Its descriptions of materia medica are clear, thorough, and systematic - a characterization which applies equally to its explanations of chemical and pharmaceutical processes and tests. Illustrations are employed wherever they can be of value in aiding the descriptions of drugs or the most approved apparatus, there being a total of 320 elaborate engravings. The therapeutic portion of the work is no less complete, and the delineations of actions and uses of medicines, arranged alphabetically in the text under the names of the drugs, are placed most suggestively at command by the recommendations under the various Diseases in the Therapeutical Index; together with the General Index this covers 25,000 references, a measure of the immensity of detail in this volume.

Of the accuracy of this work it is almost needless to speak. It contains the latest and most prominent knowledge of therapeutical and pharmaceutical savants in the United States. In a word, it offers a complete and thoroughly trustworthy encyclopedia of materia medica, therapeutics, pharmacy, and the collateral sciences, and that too with no advance of price over the previous edition, notwithstanding the great increase in number of pages.

HAND-BOOK OF INSANITY. By Doctor Theodore Kirchhoff. Cloth; 12mo; pp. 360. Price, $2.75; flexible leather, gilt top, $3.75.

This is volume one of a new venture of Messrs. William Wood & Co., entitled *The Medical Practitioner's Library*. The volumes of this Library are uniformly and elegantly bound, and a marked exception to the rule of somber covers which has been so long, and without reason, applied to scientific and professional works.

The perusal of this volume is a treat to one who seeks light on such a difficult branch of medicine. There is no work known of such practical utility to the profession, and which so well represents the scientific views of the day. It is marked by exactness of statement in particular facts as well as in generalization. It has all the merits that belong to German thoroughness combined with American lucidity; and it abounds in clinical pictures, which are faithfully drawn by a master hand. The descriptions of sufferers from mania, melancholia and paranoia are most excellent.

Indeed there are no treatises on insanity better adapted for the general practitioner and the student than this, since it is both brief and clear in descriptions, and its recommendations for treatment are sound and unencumbered with confusing discussions on unessential and obscure points.

OPERATIVE SURGERY. By Th. Kocher, M. D. Cloth; 8vo; pp. 200. Price, $3.00. William Wood & Co., New York.

This is one of the most practical, well illustrated, and well printed volumes it has been our fortune to peruse. The name of the author, who is well known as a Professor at the University of Berne, Switzerland, and Director of the Surgical Clinic, is sufficient evidence of the thoroughness of the work. The first chapter gives a concise summary of anæsthesia in its various phases, of the general treatment of wounds, the selection and direction of incisions in various parts of the body, all illustrated with plates that are unmistakably definite in character. Part second is devoted to operations on the skull, the face, and different triangles of the neck, on the thorax, the spinal canal, in the lumbar region, upon the abdomen, the perineum, sacral region, and upper and lower extremities. Part third indulges in general observations and the management of exsections and resections. Part fourth is devoted entirely to amputations and exarticulations. It is rare indeed that the delineations are so perfect as those offered by the illustrations in this work.

YOUTH'S COMPANION. Price, $1.75 per year. Perry Mason & Co., Boston.

A bound volume of this remarkable journal embraces successive issues for the year 1893, covering nearly 700 pages. It is not only by all odds the best exclusively juvenile paper published in the world, but is the best *family* paper. We venture to say that its pages are in greater demand by adults than by adolescents. No other publication gives such careful, definite information as is

to be found in its editorials—information that is not in any way biased by politics; no other is in every way so cleanly and healthy, since an objectionable feature of any kind has never been found in its columns. The corps of contributors includes the best and brightest names in American and foreign literature, and the variety of story, sketch, poem, puzzle, and entertainment is excellent. In mechanical excellence the standard of the paper is equally high; the paper and typography are the best, and the illustrations are by artists who have made the reputation of the highest class magazines. Its special holiday numbers are always gems of the art pictorial.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 per year. J. B. Lippincott Co., Philadelphia.

The complete novel in the March number is "A Desert Claim," by Mary E. Stickney—a charming tale of ranch life in Northern Colorado. Gilbert Parker's serial, "The Trespasser," reaches its ninth chapter; "The Inmate of the Dungeon," by W. C. Morrow, is a story of uncommon power; Joel Chandler Harris, in "The Late Mr. Watkins of Georgia," compares a curious legend of the South with one that is prevalent in India; in "A Prophet of the New Womanhood," Annie Nathan Meyer considers Henrik Ibsen from an unfamiliar point of view; Emma Henry Ferguson tells us "More about Captain Reid;" John Gilmer Speed describes "The Training of the Saddle-Horse;" Doctor Charles C. Abbott writes of "Bees and Buckwheat," and Charles McIlvaine of "The Evolution of Public Roads." The poetry of the number is by Anna Robeson Brown and John James Meehan.

A PRACTICAL TREATISE ON DISEASES OF THE HAIR AND SCALP. By George Thomas Jackson, M.D. Cloth; 12mo; pp. 414. Price, $2.75. E. B. Treat, New York.

Fourteen years ago the author of this work first compiled a treatise upon diseases of the hair, which met with exceptional favor at the hands of the medical public. Since then the book has from time to time been revised and elaborated until it has reached its present proportions. Within its pages will be found about all the knowledge that is available regarding diseases of the hair and scalp. Every page of the present edition has been revised, and new light on follicular decalvans, leptothrix, aplasia pilorum propria, as well as many new sections to old chapters, added. The bibliography has been brought down, in fact, to January, 1893, and new illustrations inserted in the text. We can cordially recommend this volume to the medical public.

NOTES ON NURSING IN EYE DISEASES. By C. S. Jeaffreson, M.D., F.R.C.S.E. Cloth; 16mo; pp. 90. Price, 2s. 6d. John Wright & Co., Stone Bridge, Bristol, England.

This book does not pretend to be a complete manual of nursing, but contains merely the application of certain general rules to the special exigencies of ophthalmic hospital practice. No book framed on these lines has ever before been issued.

The author has described chiefly the applications and methods which have proved satisfactory from the result of personal experience. The information and instruction laid down will undoubtedly be found of great service to all who suffer, or have charge of sufferers, from eye disease. The illustrations are taken directly from photographs.

The author promises, if subsequent editions of the volume are called for, to extend both the matter and illustrations.

THE DELINEATOR. Price, 15 cents; $1.00 per year. Butterick Publishing Co., New York.

The March number is entitled "The Spring Announcement Number," and in its artistic display of new styles and general attractiveness has not been surpassed by any former issue. In addition to the usual entertaining reading, there are several features to be noticed, one being an original and decidedly novel "Scarf Drill;" another is the resumption of the article on the "Uses of Crepe and Tissue Papers," with illustrations; a third, the first of a series of "Hygienic Living." The "Housekeepers' Department" considers dainty cookery, hints to housewives, household renovation, etc. "Gesture and Elocution" is continued in a masterly way. "Around the Tea Table" is as bright and chatty as usual. There is also the usual flower culture, knitting, tatting, crocheting, etc.

A TREATISE ON HEADACHE AND NEURALGIA. By J. Leonard Corning, M.A., M.D. Cloth; 12mo; pp. 275. Price, $2.75. E. B. Treat, New York.

We have formerly had occasion to give most favorable reviews to previous editions of this volume, and now it would seem superfluous to attempt more than to mention that the work has reached its third edition, which has been considerably enlarged, and that its

value has been materially enhanced by the addition of an appendix on the relations of eye-strain to headache, contributed by Doctor David Webster, of New York. Doctor Corning has also added a new chapter on localization of the action of remedies upon the brain, which doubtless will prove suggestive as well as directly useful.

DEMOREST'S FAMILY MAGAZINE. Price, 25 cents; $2.00 a year. W. Jennings Demorest, New York.

The March number contains some most excellent fiction, and the department devoted to fashion is particularly interesting and suggestive—the spring styles appear in all their glory, with descriptions how to cut and make them. A most interesting article is one upon "Dogs of High Degree." The continuation of the paper dealing with the problem of employment for womanhood, which appears in the form of a narrative, constitutes an especially able chapter. We regret we have not more space to devote to this review on this occasion, for the magazine is, as ever, replete with good things.

PROCEEDINGS OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY: Volume IV; Session of 1893. Cloth; 8vo; pp 484. Printed for the Society, Philadelphia.

This is a collection of fifty-eight papers that were presented to the Philadelphia County Medical Society during 1893. They are all possessed of merit, and a considerable number are of a rare class, which renders the volume most desirable. The discussions of the different articles are likewise printed, which adds to the value of the work.

ANNOUNCEMENT.—Messrs. William Wood & Co. have in press, and will publish as early as possible at intervals of four months, a most important work on Medical Jurisprudence, Forensic Medicine, and Toxicology, edited by R. A. Withaus, A.M., M.D., and Tracy Baker, A.B., LL.B., names in the domain of medicine and law which are sufficient guarantee of the unexcelled character of the work. The authors moreover have had the collaboration of such eminent gentlemen as Doctors Bullard, Edgar, Lamb, Outten, Wood, Stoddard, Cameron, Fisher, Loomis, Roswell Park, Rosse, Woodward, Woolsey, Vandenberg, and in the domain of law Messrs. Becker, Boston, Poste, and Honorable Goodwin Brown.

A concise, practical and thorough system of medical jurisprudence has long been a crying need to both the legal and medical professions. This important publication will consist of four large octavo volumes of about 800 pages each, printed in the best manner from new type, and illustrated by line and "half-tone" engravings and chromo-lithographic plates. It will be sold by subscription only, at the rate of $5.co per volume, cloth; $6.00, leather.

Therapeutic Brevities.

Emergency Treatment of a Toothache.—Doctor J. E. Weaver, of Rochester, makes the following valuable contribution to the New York *Medical Record:*

Toothache is a little thing in the books, but many physicians would rather meet a burglar at the door on a dark night than a call to cure a bad toothache of several days' continuance; a hypodermatic of morphine only postpones the evil day, and usually the patient is respectfully referred to the dentist. The tooth should not be extracted while the jaw and gums are inflamed and the latter swollen, and it is the physician's duty to treat the case until the above conditions are removed. Always keep a small phial containing the following mixture: Chloroform, gtt. x; glycerin, gtt. x; sat. sol. acid carbol., gtt. x; morphine, gr. j; with a small wad of absorbent cotton. If the offending tooth has a cavity or decayed surface, saturate a small pellet of cotton with the above mixture and put into the cavity, or against the decayed surface, as the case may be—never pack the cotton in, or the more is the trouble—but have the pellet small enough to enter without crowding. In most cases this will end the trouble. When the gums are swollen and tender, paint two or three times, two minutes apart, with a 4-per-cent. solution of cocaine. This time of year your patient may have been eating a good deal of fruit. The tongue and mucous membrane of the mouth are pale, stomach sour, and next day the toothache will return. Give ten grains of subcarbonate of bismuth and ten grains of phenacetin at once, and a similar dose before each of the following meals, with a laxative if needed, and stop all fruit for a few days, and it will not return. The same powder every two hours, with cessation of fruit-eating, will stop the persistent, tormenting neuralgias so prevalent at this season.—*Brooklyn Medical Journal.*

Creosote in Latent Tuberculosis.—Dr. Blanchard, of Geneva, reports seventeen cases of latent tuberculosis, all of which made a rapid and complete recovery under the use of Creosote. The symptoms were cough with or without muco-purulent expectoration, emaciation, dyspnœa, general weakness, diarrhœa, and night sweats. The remedy was administered in emulsion consisting of sweet oil of almonds, the beaten yolk of an egg, and ten ounces of water; and the dose was, at the beginning, four minims, gradually increased to thirty minims. When the dose exceeded

fifteen minims it was divided, and administered in two or three enemata. The conclusions are:

Pulmonary tuberculosis is curable:

Creosote is a valuable remedy, especially in incipient cases:

It is important that the diagnosis should be made early, to give this mode of treatment a fair chance:

The remedy is also valuable in cases of bronchial catarrh following influenza (regarded by Dr. Blanchard as cases of incipient phthisis):

No unpleasant symptoms followed the use of this drug when properly used.

In the use of Creosote, the precaution should be taken to examine the urine frequently by the chloride-of-iron test, and to note the occurrence of a smoky appearance. When the urine becomes smoky, the remedy should be administered only on alternate days.—*La Médecine Moderne.*

Food Poisons.—M. Juhel-Rénoy (*Annales d'Hygiène Publique*), analyzes the symptoms which supervene after the ingestion of unsound meat, especially pork. He finds the effect proportionate to the quantity taken, unless putrefaction continues in the alimentary canal owing to the inactivity of the digestive processes. He considers the fundamental symptoms to be: Fœtid diarrhœa, nausea, vomiting (accompanied by a feeling of loss of power), some hours after partaking of the suspected food: After an interval of twenty-four hours polymorphic eruptions appear (urticarial-scarlatinal-roseolous), with or without fever; the erythema multiforme of Hebra may be thus caused: In serious cases a typhoid condition occurs—stupor, delirium, digestive derangement, hæmorrhages, feverishness: In a more advanced stage—recovery being still possible—all the complications of specific fevers may develop, chiefly localized on serous membranes: The only necessary condition is the introduction into the organism of poisons originating in food—particularly through putrefactive changes.—*Food and Sanitation.*

Thyroid in Myxœdema.—Doctor Henry Hun, of Albany, N. Y., Professor of Nervous Diseases Albany Medical College, writing in the *Albany Medical Annals* of a case of myxœdema which came under his charge July 24th, 1893, remarks: "This case was given three times daily a capsule containing five grains of dried Thyroid gland prepared by Parke, Davis & Co., and he continued to take ten or fifteen grains daily, with occasional intermissions, during four months. At the present time he takes the Thyroid at the rate of fifteen grains a day during one week in each month. The effect of the treatment has been very decided, and has resulted in complete cessation of all his unpleasant symptoms."

Another patient was given three times daily for three weeks a capsule containing five grains of dried Thyroid prepared by Parke, Davis & Co., and at the end of the time stated she had improved in all respects. She was so much better that she left the hospital, since which time she has been lost sight of.

The Action of Scopolamine on the Eye.—Doctor Thomas R. Pooley, before a New York society, reviewed the roseate experience with this new mydriatic described by two Continental writers, which had led him to give it a trial beginning with last August.

It belongs to the atropine group, is contained in hyoscyamine without being identical therewith, and the preparation he used was Merck's. Its action was found to be about five times as strong as that of atropine, and was of briefer duration by twenty-four to forty-eight hours, which made it much better in examining the eyes for errors of refraction. Still, the influence of homatropine passed off in about the same length of time, and the latter, contrary to the statement of writers abroad, less frequently caused toxic symptoms. Doctor Pooley remarked he had "two cases of pretty severe toxic symptoms from scopolamine."

Carpaine.—This is an alkaloid obtained from the leaves of the *Carica Papaya*, or "Paw paw" tree, and was recently the subject of experiment by Doctor von Oefele, who found it to act like the digitalis group of cardiac drugs; in doses of $\frac{3}{8}$ grain *per diem* it caused similar disturbances in the rhythm, blood-pressure and pulse. He also found that Carpaine was the only congener of digitalis that could be used hypodermatically without causing irritation and abscesses. The cardiac diseases for which he found it most useful were aortic insufficiency and stenosis. In doses of $\frac{1}{10}$ grain daily it effected reduction of the frequency of pulse, alleviation of dyspnœa, and doubled the excretion of urine.

Practical Application of Physiological Antagonism.—Salicylic acid and the salicylates are apt to give rise to headache, vertigo, noises in the ears, etc., which arise from con-

gestion of the cerebral vessels and of the membrana tympani, as well as of the labyrinth and tympanic cavity. These manifestations, which sometimes constitute a serious obstacle to the administration of large doses of the remedy in question, can be avoided, according to Doctor F. Schilling, of Nuremberg, by combining the salicylates with Ergotin, the latter counteracting by its action on the blood-vessels the vaso-dilating effect of other remedies without in any way interfering with their therapeutic activity.

Treatment of Ulcers by Indigo.—During the rains in 1890, says Doctor Tarak Nath Ghose, Assistant Surgeon at Shahjahanpore, I had a case of chronic ulcer which defied all kinds of dressings. One morning it occurred to me to try the following ointment: Indigo (finely powdered), one drachm; simple ointment, one ounce. After just three days' application the ulcer showed a healing tendency, and in a fortnight it was quite well. Since then have given Indigo fair trial, with good results. In syphilitic sores, however, its effect is *nil*. In damp and rainy weather its action is remarkably good.—*Indian Medical Record.*

To Allay the Craving for Alcohol.—

℞ Tinct. capsicum, 2 drachms.
Tinct. nux vomica, } ää 1 drachm.
Acid. nitro-hydrochloric dil. }
Infusion gentian, to make 12 ounces.

Dose: Two tablespoonfuls as required.

—*The Practitioner.*

Coronillin.—This is the glucoside of *Coronilla scorpioides*, and is claimed to be equal in power to digitalin. Not sufficient experiments have been made, however, to warrant a decision as to how it affects the heart. It is said to differ from digitalis in not causing so much contraction of the arterioles.

Chlorides as Disinfectants. — These have their dangers; they are apt to cause laryngeal complications and aggravate cases of diphtheria, croup, etc.; at least such has been the experience of a writer in the *Medical Century.*

Corn-Solvent.—

Salicylic acid, 60 grains.
Extract Indian hemp, 8 grains.
Flexible collodion (three-quarters strength), 1 ounce.

Dissolve and mix.

—*Indian Medical Record.*

Medical Progress.

WHAT THE MILKMAN THINKS OF WATER. —I went over to see Biles, our milkman, the other day, and I found him in the back yard mending his pump. In reply to a jocular remark about his dairy being in a bad way when the pump was out of order, he said:

"Oh, I ain't going to deny that we water the milk. I don't mind the joking about it, but all I say is that when people say we do it from mercenary motives they slander the profession. No, sir, when I put water in the milk I do it out of kindness for the people who drink it. I do it because I am philanthropic, because I'm sensitive and can't bear to see folks suffer.

"Now, s'pose a cow is bilious, or something, and it makes her milk unwholesome; I give it a dash of water, and up it comes to the usual level. Water's the only thing that'll do it. Or, s'pose that cow eats a p'ison vine in the woods, am I going to let my innocent customers be killed by it for the sake of saving a little labor at the pump? No, sir! I run in a few quarts of water, neutralize the p'ison, and there she is, right as a trivet.

"But you take the best milk that ever was, and it ain't fit for the human stomach as it comes from the cow. It has too much casein in it. Professor Agazziz says that millions of poor ignorant men and women are murdered every year by loading down weak stomachs with casein. It sucks up the gastric juice, he says, and gets daubed all over the inside until the pores are choked, and the first thing you know is that the man suddenly curls up and dies.

"He says that, out in Asia, where the milkmen are not as conscientious as we are, there are whole *cemetries* full of people that have died of casein, and that before long that country will be one vast burying-ground if they don't ameliorate the milk.

"When I think of the responsibility resting on me, is it singular that I look at this pump and wonder that people don't come and silver-plate it, and put my statue upon it? I tell you, sir, that that humble pump, with the cast-iron handle, is the only thing that stands betwixt you and sudden death.

"And, besides that, you know how flat raw milk tastes—insipid and mean. Now, Professor Agazziz, he says that there is only one thing that will vivify milk and make it luxurious to the palate, and that is water. Give it a few jerks under the pump, and out it comes, sparkling and delicious, like nectar.

"I dunno how it is, but Professor Agazziz says that it undergoes some chemical change, that nothing else will bring it about but a

flavoring of fine old pump-water. You know that the doctors all water the milk for babies. They know mighty well if they didn't those young ones 'd shrink all up and sorter fade away.

"Nature is the best judge. What makes cows drink so much water? Instinct, sir, instinct. Something whispers to 'em that if they don't sluice in a little water that casein 'd make them giddy and eat 'em up. Now, what's the odds whether I put in the water or the cow does? She's only a poor brute beast, and might often drink too little; but when I go at it I bring the mighty human intellect to bear on the subject; I am guided by reason, and I can water that milk so's it'll have the greatest possible effect.

"Now, there's chalk. I know some people have an idea that it's wrong to fix up your milk with chalk.

"But that's only mere blind bigotry. What is chalk? A substance provided by beneficent Nature for healing the ills of the human body. A cow don't eat chalk, because it's not needed by her. Poor, uneducated animal! She can't grasp those higher problems, and she goes on nibbling some grass and other things, and filling her milk with acid, which destroys human membranes and induces colic.

"Then science comes to the rescue. Professor Agazziz tells us that chalk cures acidity. Consequently I get some chalk, stir it in my cans, and save the membranes of my customers without charging them a penny for it—actually give it away, and yet they talk about us milkmen as if we were buccaneers.

"But I don't care. My conscience is clear. I know mighty well that I have a high and holy mission to perform, and I'm going to perform it if they burn me at the stake. What do I care how much this pump costs me, and if chalk is threepence a pound, so long as I know that without it there wouldn't be a membrane in this community; and you'll believe me, that before another century will roll round, a grateful universe will worship the memory of the first milkman who ever had a pump and doctored his milk with chalk. It will, unless justice is never to have her own."

Then Mr. Biles rigged up his pump, toned up a few cans of milk, corrected the acidity, and went into the house to receipt my bill.—*Food and Sanitation.*

THUJA IN ACHILLODYNIA DUE TO GONORRHŒA.—Doctor A. Welsch, of Augsburg, Germany, has observed cases of this disease, which was first named by Professor Ahlbert, of Vienna, and consists of a painful swelling of the insertion of the tendon of Achilles. In three cases it was due to a gonorrhœa which had persisted for some time. At the insertion of the tendon there was a slight swelling and induration. The pain was not constant, but ran a parallel course with the urethral discharge and persisted a long time after this had disappeared. It is possible the cases were due to general infection and were of gonorrhœal rheumatic origin, which would go to support the belief of the older physicians that gonorrhœa was a systemic and not a local affection. In this peculiar condition he employed Thuja, both internally and externally. Externally he used a 1:8 solution, which was applied by means of compresses, and internally he gave from four to six drops of the tincture three times a day. This same treatment he employed in gonorrhœal pains in the hip and knee-joints. Thuja, like copaiba, has a specific action upon the mucous membrane of the urethra, bladder and ureters, and even of the kidneys, but unlike copaiba it exerts an influence upon the articular symptoms of gonorrhœa. In erosions of the cervix and os uteri, as well as in cases where there was a suspicion of cancer, he has obtained good results by the local application of equal parts of the tincture of Thuja and water.—*Archiv für Homœopathie.*

SPONTANEOUS ABSORPTION OF CATARACT.—I have under observation a case of cataract in which the diseased lens has undergone remarkable absorption. The patient is a Hindu male of 70. The first symptoms were observed when he was forty years of age, and these gradually developed into total blindness in the course of twelve months. He remained in this state for ten years without relief. Thirty years ago he unfortunately fell into the hands of a native quack, when something in the shape of an operation was performed. The eye suppurated, went to the bad, and the eyeball collapsed. The other (right) eye, when I first saw it, seemed suitable for operation, and I strongly advised it. Twelve years later, to my own knowledge, while still utterly blind, he had a severe attack of bleeding from piles and became so weak and prostrated as to be confined to bed for over a month. During convalescence he noticed that he could see a little, and on examining the eye I found a small portion of the inner side of the cataract to be absorbed. Since then there has been a gradual progressive absorption, and

at the present time but a small speck remains. With the aid of a cataract glass the old man reads and writes easily and comfortably, and he sings the praises of *charcoal* as effecting his cure, as at the time he suffered from piles some native charlatan told him charcoal, from its blackness, had the power of removing white spots from any part of the body whatever.—Doctor Ram Narain (Assist. Surgeon, Delhi) in *Indian Medical Record.*

TURNIP AS A SUSTITUTE FOR DECALCIFIED BONE IN INTESTINAL SURGERY.—R. Baraçz, seeking a substitute for decalcified bone-plates, which take too long to prepare, examined various vegetable substances, and came to the conclusion that turnip is the best material for the purpose. He performed a series of experimental operations on dogs, and among six gastro-enterostomies there were five recoveries, one dying of peritonitis caused by the escape of the contents of the stomach into the peritoneal cavity at the time of the operation. Among three cases of resection of the intestine there was one death due to intestinal occlusion consequent on the anastomosis being made too far from the sutured end. He considers the failures had nothing to do with the turnip plates. In a case of gastro-enterostomy which proved fatal, the seat of anastomosis was examined two days after the operation, and the plates found at the points where they had been applied fixed by sutures around the fistula; the stomach plate was soft like boiled carrot, the intestinal plate somewhat harder. Two dogs were killed fifteen to twenty days after gastro-enterostomy, and the plates found neither at the seat of anastomosis nor in the intestinal canal; the sutures had also disappeared. Neither was any trace of plates found in cases where the dogs were sacrificed at a later period—namely, thirty-eight to fifty days after the operation.—*Przeglad Chirurgiczny.*

DELIVERY OF THE AFTER-COMING HEAD AND PROTECTION OF THE PERINEUM.—Ostermann (*Berliner Klinische Wochenschrift*) recommends the following procedure: The middle finger of the right hand is placed in the mouth of the child, which rests with its abdomen upon the right forearm, while the left hand presses the head through the pelvis externally. At the moment when the forehead appears the pressure of the left hand ceases, and with it the feet of the child are raised, or the feet may be raised by the nurse, and the child laid upon the mother's abdomen. At the same time the finger of the right hand is removed from the child's mouth, and the hand is placed upon the perineum. The fingers of the left hand are then placed in the child's mouth with the elbow directed upward.

This second part of the operation may be performed under close inspection and the perineum protected in the same manner as in head presentations. By pressure from above or traction upon the lower jaw the forehead may be caused to pass more rapidly over the perineum. In this position the aspiration of mucus into the trachea is not favored, and the mouth may be washed, if desirable, before extraction is completed.

REMOVAL OF CLAVICLE.—Recently Mr. Haslam, of Birmingham, excised a clavicle for sarcoma. Removal was effected by two incisions, the one running along the entire length of the bone, and the other carried upwards over the most prominent part of the growth. To protect the subclavian, the outer end of the bone was raised by cutting through the shoulder attachments and the acromio-clavicular joint, and after dissecting off the chest and neck muscles the bone was removed by dividing the sterno-clavicular articulation and the rhomboid ligament. There was no hæmorrhage of any importance, except when a medium-sized vein was cut while dissecting a portion of the growth that was adherent to the deep cervical fascia.

Free exit for pus being provided by means of a drainage tube, the wound was dressed with sublimate gauze, and, though healing was somewhat prolonged, no harm resulted, and the temperature only once reached 100.6° F. At present the cicatrix is sound, there is very little deformity, and though not yet as free as normal the movements of the arm are considerable.—*British Medical Journal.*

THE PUPILS IN ANÆSTHESIA.—In using chloroform it is advisable, after the patient has become apparently insensible, to watch the pupils as a guide to the state of the medulla. After complete anæsthesia is induced, the pupils, which were previously contracted, begin to dilate. This dilatation *is the danger sign!* It indicates the cardiac respiratory centres are beginning to be inhibited, or probably paralyzed, by the anæsthetic, and warns the operator to suspend, temporarily at least, the inhalation. Often cases are witnessed wherein chloroform is being administered in which all the limbs, apparently flaccid, when raised and let fall, drop to the table as if dead, yet retain consciousness of pain. In such the pupils are

well contracted; a few moments after the contraction they will begin to dilate, and then all sense of pain is abolished. At this stage the danger of chloroform, and also of ether, is, indeed, considerable, if the anæsthetic is carried too far; for then the protective living wakefulness of the medulla is being dangerously overcome.—*Medical Brief.*

INFLUENCE OF CHLOROFORM ON THE KIDNEY.—Rindskopf has examined the urine of one hundred perfectly healthy persons before and after chloroform anæsthesia, and in thirty-one out of ninety-three he found positive changes in the urinary secretion after both the official chloroform and chloroform Pictet. In six cases there was albumen alone; in six, albumen and casts; in nineteen, casts alone; in four, cast-like elements; in twenty-one, numerous leucocytes; in nineteen, epithelia of varied origin; and in six, red blood-corpuscles. As to the albumen, it was present only in traces in the first days after anæsthesia, and disappeared on the third day. The casts alone appeared in the same cyclic manner; they were most numerous on the first morning after the operation, disappearing within sixty to seventy hours; they were exclusively hyaline. In case of necessarily prolonged anæsthesia the urine should be examined, and chloroform should be used with great care in persons with renal disease.—*Wiener Medizinische Presse.*

HÆMATEMESIS.—Doctor Burland describes three cases of excessive blood loss, with extraordinary improvement after the exhibition of a drachm dose of Ipecac in the form of a bolus with glycerin. He emphasizes the necessity of keeping the patient motionless with the spine arched forwards by means of hard pillows placed beneath the dorsal column. Nothing whatever should be given by the mouth except the ipecacuanha; this should be fresh, and a few drops of tincture of opium ought to be added to sufficient glycerin to mould the mass into a bolus. Especial care should be taken that no fluid is given either by the mouth or the rectum for at least two hours after the administration of the drugs. The patient's strength should be supported both by enema and stimulants. Brandy given by the mouth is almost invariably rejected and keeps up the vomiting. Doctor Burland believes that in Ipecac thus administered we have a remedy of singular potency in the treatment of hæmatemesis.—*The Lancet* (London).

SPASM OF GLOTTIS IN HYSTERIA.—Leo, in the *Deutsche Medicinische Wochenschrift*, relates the case of a man who had chorea at eleven and eighteen years, and at twenty convulsions with loss of consciousness. In January, 1893, he was seized with tonic spasm in the left *triangularis menti* muscle, clonic and tonic spasms in the left arm, clonic spasm of the leg, choreic movements in the tongue, with complete anæsthesia of the left arm and leg; the field of vision was unaffected, and there was no organic disease. Hysteria being diagnosed, he was successfully treated with Hyoscine; but a few months later he had another convulsion, which affected the whole of the left side, and the following evening he had a further attack accompanied by inspiratory dyspnœa, from which he expired in five hours. The autopsy showed death to have been due to spasm of the glottis, probably accelerated by that of the diaphragm.

CONGENITAL ABSENCE OF NAILS.—Doctor Eichhorst reports the case of a man, twenty-six years of age, who had no nails on either fingers or toes. The nail bed and fold were well formed, and the former presented a shiny surface, giving the appearance of a very thin nail. Close examination showed, however, that there was not the slightest trace of a nail, the skin of this part being softer and more delicate even than the surrounding integument. Sensation was also as acute here as on the palmar surface of the fingers.—*Centralblatt für Klinische Med.*

THE LESION OF PSORIASIS.—Audry considers that the essential element of psoriasis is the absence of eleidin, accompanied by defect in the cornification of the epidermic cells. On this point he confirms what had already been stated by Suchard in 1882. On the other hand, he found in *pityriasis rubra pilaris* that the eleidin is increased, constituting an essential difference between the two maladies. In ichthyosis there is a regular hypertrophy of the eleidin, with an entire absence of inflammatory appearances.—*British Medical Journal.*

ENLARGEMENT OF THE PITUITARY GLAND AND ACROMEGALY.—Dr. Dana, of New York, has recently called attention to the enlargement of the pituitary gland as a morbid condition associated with acromegaly and elephantiasis.—*Medical Record.*

The Medical Age.

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Original Articles.

PHARMACOLOGY OF THE CAMPHOR GROUP AND OF THE ETHEREAL OILS.*

BY PROF. RUDOLPH ROBERT.

[In the following I reproduce the substance of a dissertation by my pupil, Doctor A. Lapin. Jurjew (Dorpat), 1893.—R. K.]

Camphor is incontestably one of our oldest and likewise one of our most important medicaments. As early as the tenth century after Christ, the Persian pharmacologist Abu-Mansur Muwaffak† praised the stimulating action of camphor on the heart and nervous system; and even to-day camphor occupies almost the first place in the series of our analeptics or restoratives, its direct stimulant action on the nervous system and circulatory apparatus having been also demonstrated by manifold experiments. Unfortunately, camphor likewise possesses properties which impede its practical application not a little; of these objectionable properties, the principal one is its slight solubility in aqueous fluids. Hence, it is the familiar custom to administer camphor subcutaneously only in ethereal or oily solution—a mode of application which is by no means inconsequential to either patient or physician. This circumstance long ago became the occasion for seeking other analeptics—which, though largely employed, have yet proved incapable of superseding camphor, despite its unpleasant side-properties. Thus, scientists naturally began to weigh the possibility of discovering in the very large group of camphor-combinations one which should possess, when therapeutically employed, all the advantages of camphor with none of its drawbacks. For this purpose Al. Lewin* (under Schmiedeberg) investigated the hydrochlorate (soluble in water) of two bases—bornylamine and amidocamphor—and found that both these camphor derivatives, especially the bornylamine, possess all the characteristic properties of camphor. Before Al. Lewin, Pellacani,† who had made a pharmacological study of the camphor group, discovered that the camphorol ($C_{10}H_{16}O_2$) produced by Schmiedeberg and Meyer, and readily soluble in water, corresponds in all its properties with common camphor, and manifests even a more intense action than the latter. Nevertheless these camphor derivatives were not adopted into therapeutics, by reason of their difficult production, thus leaving imperfectly solved the problem of a satisfactory substitute for camphor.

I—SODIUM CAMPHOCARBOXYLATE.

Among the not very numerous derivatives of camphor which are soluble in water is the Na- salt of camphocarboxylic acid ($C_{11}H_{16}O_3$) discovered in 1868 by Baubigny.‡ I made it my task to examine this camphocarboxylate of sodium, which had not been tested pharmacologically, in order that I might eventually propose it as a substitute for camphor. I prepared the soluble sodium salt of the insoluble camphocarboxylic acid placed at my disposal by the Farbenwerke, vorm. Meister Lucius & Brunning, according to the method of Kachler and Spitzer,§ while I manufactured the sodium salt of the camphocarboxylic acid obtained from the labora-

* Written expressly for the MEDICAL AGE, and translated by Joseph Helfman.

† Abu-Mansur: "Liber Fundamentorum Pharmakologiæ;" translated from the original text and provided with explanatory notes, by Abdul Achandow; printed in Volume III of "Historical Studies" at the Pharmacological Institute at Dorpat. Published by Prof. R. Kobert, Halle, 1893.

* Al. Lewin, *Archiv f. Exp. Path. und Pharmak.*, Bd. 27, p. 226, 1890.

† Pellacani, *Archiv f. Exp. Path. und Pharmak.*, Bd. 17, p. 385, 1883.

‡ *Ztsch. f Chemie*, published by Beilstein, Fittig and Hübner, Bd. iv, p. 481, 1868.

§ Kachler and Spitzer, *Sitzungsberichte der Wiener Akademie der Wissenschaften (Mathem.-Naturwissench. Klasse)*, Bd. lxxxiii, 1881, p. 716.

tory of Prof. J. W. Brühl, of Heidelberg, according to the directions of the latter.* With the camphocarboxylate of sodium thus obtained and readily soluble in cold water, I performed experiments on warm- and cold-blooded animals—frogs and cats. In these experiments it was found that frogs bear without resulting symptoms subcutaneous injections of 0.1 gramme of camphocarboxylate of sodium in aqueous solution, whereas camphor and its other derivatives always kill the frog when only 0.02 gramme is subcutaneously applied.

The aqueous camphocarboxylate of sodium was introduced into the stomachs of cats with the aid of a tube, and it was found that all the doses administered remained without effect—even those exceeding twelve times that quantity of camphor which was sufficient to produce in a cat of like weight the severest convulsions. Moreover, larger quantities of the sodium camphocarboxylate solution (up to 1.50 grammes) were injected directly into the cat's circulation, and all these doses proved as ineffective as when administered by mouth.

These experiments make manifest the fact that the camphocarboxylate of sodium exerts no influence whatever on the nervous system of cold- or of warm-blooded animals.

On the other hand, in order to study the influence of camphocarboxylate of sodium on the organs of circulation, I experimented by passing electric currents through the isolated hearts of frogs, with the aid of a Williams apparatus,† and found that the isolated frog-heart remains altogether unaffected by this salt.

Finally, in order to determine the behavior of the hearts of warm-blooded animals toward this salt, I availed myself of the experiments with blood-pressure, which also, however, exhibited the inertness of camphocarboxylate of sodium, so far as the blood-pressure was concerned.

I believe, therefore, that my observations warrant the assertion that camphocarboxylic acid and its sodium salt possess no pharmacological properties.

The absolute inertness of the camphocarboxylate of sodium, with respect to both classes of animals, is all the more remarkable, since camphor itself, as before stated, provokes, in much smaller doses, the most striking symptoms in the same animals. This disparity of conduct in camphor and its derivatives can only be explained by the fact that camphor ($C_{10}H_{16}O$), a body very rich in hydrogen atoms, exerts a reducing action in the animal organism, thus producing the familiar phenomena in the latter. On the other hand, in the animal organism, the camphocarboxylic acid or its sodium salt, which is produced by a combination of the camphor with the carboxyl CO_2H and thus is saturated with oxygen ($O=C<^{C_{10}H_{15}O}_{OH}$), develops no influence whatever. Accordingly the acid or its salt leaves the animal organism unchanged, whereas the camphor in the organism we know to be transformed (by withdrawing the atomistic oxygen) into camphorol ($C_{10}H_{16}O_2$), the latter combining with glycuronic acid, and appearing in the urine of the animal as camphoglycuronic acid.

This mutual behavior of camphor and its carbon acid thus accords very well with the results of the investigations made by Nencki and Boutmy,* according to which the introduction of the carboxyl radical into the molecule of many poisonous aromatic combinations reduces or suppresses the toxicity of the latter. This property of the carboxyl is, as Nencki and Boutmy observed, of practical importance, since by its introduction into the molecule of the less toxic substances the toxicity of the latter may be completely overcome, and by similar treatment the toxicity of very poisonous bodies diminished. Thanks to this property of the carboxyl radical, we may thus succeed in adapting to therapeutic uses substances otherwise unavailable.

II—BORNEOL.

In pronounced contrast to the camphor of the Laurineæ, the Borneo-Sumatra camphor has seldom been the subject of pharmacological investigations. The text-books have virtually nothing to say of the latter variety, or,

* Brühl, *Ber. d. Deutsch. Chem. Ges.*, volume xxiv, 1891, p. 3373.

† *Chemiker-Zeitung*, Jahrg. 16, No. 39, p. 673, with four illustrations.

* Nencki et Boutmy, *Archives des Sciences Biologiques*, publiéss par l'Institut Impérial de Médecine Expérimental à St. Petersbourg. Tome i, 1892, p. 60 (Russian and French).

at most, they quote Pellacani, who states that the borneol, $C_{10}H_{18}O$, possesses properties the reverse of common camphor's, paralyzing the heart.

I have accordingly subjected borneol to a more searching investigation, especially as I had access to the exhaustive but little known work of Stockman* in which he states, despite Pellacani to the contrary, that borneol possesses properties nearly identical with those of common camphor. The preparation which I employed was the borneol of Mag. Hirschsohn,† of St. Petersburg—prepared for the first time from the ethereal oils of *Abies sibirica* and *Abies pectinata*, and refracting the ray of polarized light to the left. I desire to add here that Pellacani experimented only with an inactive artificial borneol, whereas Stockman studied, besides the artificial, the borneol derived from *Dryobalanops aromatica* (which refracts the ray of polarized light to the right), and the so-called Ngai-camphor (chemically identical with the former, though refracting light to the left). The diverse results of the two investigators may perhaps be harmonized by allowing for the difference in the preparations examined.

As with the camphocarboxylate of sodium, in studying the borneol as well as the nearest camphor-derivatives, I was interested solely by their action on the nervous system and circulatory organs of both classes of animals.

I began with frogs and with doses of 0.005 gramme borneol in oil emulsion (borneol is insoluble in water), injecting the agent subcutaneously. Thus I found that 0.005 gramme of borneol rendered the frog paretic, whereas 0.02 gramme gave rise to a paralysis resulting in death. Larger doses produce this paralysis even more speedily, and are always attended with death of the frog. In order to determine more definitely the character of the resulting paralysis, I made the familiar test of Claude Bernard, viz., isolation of one extremity by excluding the blood, binding up the corresponding iliac artery. These experiments proved that at first only the termini of the motoric nerves are involved, the reflex irritability of the muscles and spinal marrow remaining at first intact. Hence, borneol acts on frogs after the manner of curare.

With respect to the action of borneol on the nervous system of warm-blooded animals, dogs exhibit a greater resistance thereto than cats. In the latter, the action of the borneol is revealed by a characteristic complex of symptoms, chief of which are the clonic-tonic convulsions. A further element of this complex is at first the uncertain, reeling gait of the animal; then augmented reflex irritability, excitation, and finally depression or comatose condition. The duration of the excitation stage diminishes with the increase of the quantity of borneol; and on introducing larger doses, the depression or comatose condition of the animal ensues straightway. With smaller doses this complex of symptoms is transient, and the animals recover; with larger doses they succumb amid the symptoms stated. In cats the lethal dose proved to be 0.80 gramme of borneol per kilo of animal, estimated.

The borneol, emulsified with olive oil, was administered by mouth in each instance.

The action of borneol on the organs of circulation in cold-blooded animals I first observed in frogs from which I had removed the heart, and, secondly, on the isolated frog-heart, with the aid of the Williams apparatus. Both methods of experiment yielded perfectly harmonious results. Under the influence of smaller doses of borneol (up to 0.03 gramme) the frequency of pulsation in the frog's heart was diminished, but its energy augmented. The animal's heart is paralyzed by 0.03 gramme and upwards of borneol.

The influence of the borneol on the organs of circulation manifested itself in diverse manners, as smaller or larger quantities were employed. It was found that small doses of borneol effected a lowering of the blood-pressure (in cats and dogs); larger doses, on the other hand, increased it.

The diminution of the blood-pressure by small quantities of borneol is conditioned by its paralyzing action on the vaso-motor nerves—as was distinctly revealed to us by the currents which we passed through a surviving organ. *Per contra*, the augmented blood-pressure is caused, as we found in my ex-

* Stockman: "The Physiological Action of Borneol." From the *Journal of Physiology*, vol. ix, Nos. 2 and 3.

† Hirschsohn, *Pharm. Zeitschr. f. Russl.*, 1892, No. 38.

periments with profoundly chloralized animals, by the direct action of large borneol doses on the hearts of mammalia.

The aggregate result of all observations thus affords sufficient proof that Borneo camphor exerts an action on both cold- and warm-blooded animals, similar to the camphor of the Laurineæ, only its toxic symptoms are less intense than those of the latter variety.

After demonstrating the similarity between the irritating action of the borneol on the cerebrum and medulla oblongata of warm-blooded animals, and that of the Laurineæ camphor, it struck me as highly desirable to ascertain more specifically the behavior of the spinal marrow toward borneol.

For this purpose, the spinal marrow of cats (in narcosis) was intersected, and thus made independent of the influence of the cerebrum in its functions. Some time after the intersection, borneol was introduced into the stomach, and we could then observe the interesting fact that, not only did the reflex irritability of the posterior parts of the animal increase, but, furthermore, pronounced clonic spasms of the hind paws were observable. This last phenomenon can only be ascribed to a direct stimulation of the spinal marrow by the borneol. But that this stimulation of the spinal marrow could not have proceeded from the medulla oblongata or brain, was shown by the autopsies, which exhibited complete intersection or sundering of the spinal marrow, hence establishing its total isolation. We may accordingly assert: Borneol stimulates or irritates not only the brain and medulla oblongata, but also the spinal marrow; or, in other words, the Borneo camphor exerts a stimulating action on the entire central nervous system.

Simple a plausible as the last statement may appear—ascribing to a body which exquisitely irritates the cerebrum and medulla oblongata, freedom from paralyzing properties—this is by no means assumed *a priori* with respect to the camphor of the Laurineæ. On the contrary, it is a remarkable fact that camphor is employed, in the first place, to reanimate the functions of the cerebrum and of the medulla oblongata when undergoing paralysis, and, in the second place, to paralyze the abnormally excited spinal marrow (in sexual excitement, etc.). Camphor has even been recommended as an antidote in strychnine poisoning.

Opposed to this double therapeutic utility of camphor—which, be it incidentally remarked, is of ancient acceptation—we have the latest experimental investigation of Gottlieb,* who observed in the isolated spinal marrow of mammals an augmented reflex irritability, and, in birds, even convulsions, after the application of camphor.

Further pharmacological studies will, I trust, shed more light on this obscure phase of the camphor question, and render the fruits of empirical experience more intelligible to us. My results with respect to borneol, which accord with those of Gottlieb, seem to agree with actual experience, for even to-day borneol is said to be employed in China as an aphrodisiac.†

Whether Borneo camphor will ever regain its lost popularity (it is said to have been employed exclusively up to the 17th century, having been subsequently superseded by the cheaper camphor of the Laurineæ) is dubious, for insolubility in aqueous fluids is also one of its peculiarities. It possesses, indeed, one advantage over camphor, in that larger doses may be administered.

From a practical point of view, greater attention should perhaps be bestowed on borneol-acetic-ester, which melts at the temperature of the body; is found in the ethereal oils of *Abies sibir.* and *Abies pectin.;* and from which Mag. Hirschsohn first prepared his borneol pure. The borneol-acetic-ester acts, as I proved experimentally, just as does borneol itself.

III.—MENTHOL.

Chemically related to camphor—the stearoptene of oil of camphor—is menthol, also termed mentha-camphor, which is the stearoptene of the ethereal oil of peppermint. Doubtless the latter belongs among the oldest remedies of medicine, for even in the Ebers Papyrus,‡ which was written, according to the calculations of its discoverer, 1600 years

*Gottlieb, *Arch. f. Exp. Path. u. Pharmakol.*, Bd. xxx, p. 31.

†Moeller: Lehrbuch der Pharmakognosie, Vienna, 1889, p. 382.

‡Papyrus Ebers, the Oldest Work on Medicine, by Doctor Joachim, Berlin, 1890.

B.C., mentha is mentioned as a constituent of many "recipes recommended for weakness of the head." This ancient Eyyptian indication for the employment of the mentha has been perpetuated, like the Pyramids of the country, down to our own era. Then, as now, menthol owed its fame to its anæsthetic and analgesic properties — which several years ago rendered the menthol or headache pencil ("Po-ho" of the Chinese) indispensable, especially to nervous womankind. The antiseptic properties further possessed by menthol imparted to it so much more practical value. And yet this ancient remedy has been little tested experimentally. Respecting the remote effects of menthol, we have only the investigations of Pellacani* and Stockman.† According to the former, menthol exerts a paralyzing action on the cerebro-spinal nervous system of cold- as well as warm-blooded animals; reduces, and in large doses suspends, sensibility and reflex excitability. An opposite (that is, a stimulating) action is accredited by Pellacani, on the organs of circulation, manifesting itself equally in both classes of animals.

Stockman obtained results in his experiments which do not harmonize with those of Pellacani. As little as 2.00 to 3.00 grammes of menthol, says Stockman, produces a state of excitation in the cat, which gradually changes into a stupor. The animal may recover completely after two or three days, or may succumb without regaining consciousness. Stockman never observed pronounced convulsions after menthol—rarely a slight tremor of the limbs With respect to the organs of circulation, Stockman observed, in his experiments with blood-pressure, a retardation of the pulse, from the outset, after administering 1.00 gramme of menthol, and a diminution of the blood-pressure, which was preceded by an increase thereof only in some cases. As in many other cases, so here the truth lies midway between the two assertions—as I have satisfied myself by my numerous experiments with menthol.

I administered menthol to both classes of animals and studied its effects on their nervous system and organs of circulation. The most striking symptom exhibited by menthol (dissolved in olive oil and subcutaneously injected) in frogs is its suppression of voluntary movements, and, next, the loss of sensibility to mechanical irritations. This complex of symptoms indicates a "narcotic condition" in the frogs. Indeed, the apathetic animals recovered rapidly from the effects of small quantities of menthol; but if the injected dose amounted to 0.03 gramme or more, the frogs succumbed in the narcosis, without exception.

On the other hand, the symptomatic tableau of the action of menthol on the nervous system of warm-blooded animals is different. In all cases in which the quantity of menthol employed was not less than 0.48 gramme per kilo of animal, and the maximum dose of 0.83 gramme (also per kilo) not exceeded, we observed violent excitement in the animal (cat), which in most cases supervened in paroxysms, followed in each instance by recovery. Convulsions were never observed—not even in the greatest excitation. But if the above-mentioned limit was exceeded ever so little, we could observe a gradual transformation of the excitation into a depression, accompanied with unsteady gait, and decrease of the animal's sensibility. Even in this depressed condition, despite its constant reeling and wavering, the animal yet exhibited no pronounced convulsive movements. This stage of depression became usually modified later on into an immobile and unconscious condition, attended with total anæsthesia of the animal. Rarely, indeed, yet occasionally, we observed a partial restoration of the voluntary movements, consciousness gradually returning and the sensibility of the animal again becoming normal. In many more cases, however, the above-described comatose condition persisted two to three days, at last terminating fatally. The heart, in all cases, succumbed last, its pulsations continuing with surprising distinctness until shortly before the animal expired. Larger doses of menthol manifested a depressing action on the animals at the outset, the depression not being preceded by any symptoms of excitation, and being followed by the coma described.

The entire complex of toxic symptoms and the absence of convulsions sufficiently attest

* Pellacani, *loc. cit.*
† Stockman, *loc. cit.*

the action on the psychic function of the brain—in other words, the narcosis of the animal.

It is accordingly evident from my observations that menthol is capable of narcotizing cold- as well as warm-blooded animals, and that whether the animals awaken from the narcosis or succumb therein depends altogether on the size of the dose. The fact is remarkable that dogs proved almost indifferent, even to menthol.

With respect, also, to the organs of circulation, both classes of animals exhibit the same behavior toward menthol. Thus, the isolated heart of the frog generally exhibited on the Williams apparatus a great resistance to this remedy, which in small doses even stimulated the heart-muscle, though in large doses it is capable of paralyzing the latter. With warm-blooded animals, as well, the blood-pressure always showed a tendency after small doses of menthol to rise; after larger doses, however, a gradual sinking of blood-pressure was perceptible.

To the experiments with menthol, the crystallizable portion of peppermint oil, I added experiments with the oil itself, which we know to possess, in addition to the menthol, a second liquid constituent consisting of a mixture of the various terpenes. As a general result, such an unmistakable similarity between its action and that of menthol was revealed that all stated above regarding the latter may apply as well to peppermint oil. Only I must here refer to the more intense action of the peppermint oil, since doses of the oil correspondingly smaller than those of the menthol may, for example, produce violent excitation of the animal, and occasion, even in lesser doses, its death. Thus, my experiments on warm-blooded animals, for example, showed that the small dose of 0.13 c.c. of peppermint oil, estimated per kilo of animal, may cause an appreciable excitation of the latter. Menthol, however, as seen in the foregoing, is only capable of causing an excitation of the animal experimented on in the dose of 0.48 gramme (per kilo of animal). If we further consider that the content of menthol in the 0.13 c.c. of peppermint oil is extremely small, as is the case with Mitcham oil with which I experimented, the quantitative difference between the action of menthol and that of peppermint oil is all the more striking. I believe, therefore, that this phenomenon may be explained on the ground that menthol—an oxydized terpene—is capable of exerting in certain doses an excitant action on the nervous system, but in a much lesser measure than the non-oxydized terpenes, which latter predominate in the peppermint oil (Mitcham). This reciprocal relation between the behavior of the non-oxydized and powerful terpenes and that of the oxydized and less powerful, presents, as it seems to me, much analogy with the potent camphor (a less oxydized terpene) and the inert camphocarboxylic acid (a terpene almost saturated with oxygen). A closer analysis of the interesting and hitherto little studied pharmacological properties of the terpenes would perhaps afford us a complete explanation of this phenomenon.

The factory of Heinrich Haensel at Pirna produces "ethereal oils devoid of terpenes" (*Olea ætherea sine terpeno*). I was accordingly interested, with reference to this question, in testing pharmacologically the *Oleum Menthæ pip. sine terpeno* (Haensel) which is claimed to consist, after removal of the terpenes, of menthol alone (and hence to act as does the latter). I then found, however, that this peppermint oil, free from terpenes, which I administered to cats *per os*, always produced a depressed or comatose condition in these animals—but in no case any excitation. Menthol, however, in the same dose, administered to the same animals, regularly gave rise to a state of pronounced excitation. How, then, is this difference in the action of two chemical substances, presumably identical, to be explained? My own experiments do not enable me to answer this question satisfactorily. Yet I desire to give expression to my hypothesis that the chemical (as well as pharmacological) nature of the ethereal oils is not yet fully known, and that the latter must contain "something" in addition to the stearoptenes and elaeoptenes,—and this "something," in consequence of its exquisite paralyzing influence, prevents a manifestation of the irritating action of the menthol present in the peppermint oil devoid of terpenes.

It is not, indeed, a part of my task to subject the well known properties of menthol to

a new examination; yet I cannot refrain from alluding here to the observations incidentally made. Thus, I repeatedly assured myself of the good antiseptic action of the menthol, with which I treated the wounds of the animals experimented upon. Furthermore, aseptic suppuration, produced in the animals by crotonoleic acid, was favorably influenced by the menthol.

I was also enabled to test the anti-emetic properties of menthol on animals, utilizing for this purpose the very old but very good emetic *Narcissus poeticus* which stood at my command. To this latter property of menthol, Gottschalk* was the first to refer in 1889, having used the agent in the vomiting of pregnancy with great success. After Gottschalk's communication, appeared reports by Weiss,† Drews,‡ Kaltenbach,§ Lomer,‖ Keil,¶ and Weil,** all of whom speak favorably of the anti-emetic action of menthol, especially in hyperemesis gravidarum. These writers explain the mode of menthol's action, by its analgesic and antiseptic properties, and chiefly by its power to reduce reflex irritability. As I was enabled by the foregoing experiments to satisfy myself of the last-mentioned property of menthol, this new indication for the employment of the drug, based on theoretical considerations, seemed to me perfectly warranted.

Accordingly I instituted experiments on animals (cats), administering the *Narcissus poeticus*, followed later by the menthol. The emetic employed acts promptly. With cats the vomiting uniformly follows the administration of 0.50 gramme of an infusion of *Narcissus poeticus* within twenty to thirty minutes. The vomiting was restrained by moderate doses of menthol. I was also enabled to satisfy myself of this effect of the menthol on human beings; and my experiments, made for this purpose in three cases, yielded a favorable result in each.* Hence I cannot refrain from recommending to my colleagues a careful trial of this remedy, as its action is rapid and lasting. I am convinced that it will act in many cases where the anti-emetic agents now used leave us in the lurch. I employed this remedy as follows:

℞ Menthol, 0.05 gramme.
Olive oil, 2.00 grammes.
In gelatin capsules.

Of these capsules I administered two to four daily. At the same time the menthol acts upon the prevailing diarrhœa, the disinfecting properties of the menthol thus asserting themselves in the intestine. The latter purpose may be best achieved by administering the menthol in capsules coated with shellac and colophony, which are not dissolved in the stomach. I desire to mention particularly that none of my patients observed any unpleasant sensations either in the throat or stomach after the administration of the menthol in this form, the remedy being well borne; whereas when prescribing menthol in pill form, gastric pain was experienced. The latter I ascribe to the fact that in the employment of pills the action of the menthol is very apt to concentrate itself in one part of the stomach, while the oil in the capsule is distributed, hence is milder in its action. On the basis of these observations I should like to recommend the application of menthol in this form in the premonitory diarrhœa of cholera—in other words, the trial of this remedy in simple choleraic diarrhœa. Such experiments would have all the more warrant from the fact that menthol, administered in those doses which are necessary to restrain vomiting and diarrhœa, also acts as a stimulant on the heart as well as on the nervous system. Finally, I might emphasize the fact that the pronounced anti-bacterial properties of peppermint oil were long ago established

*Gottschalk: Menthol gegen das Unstillbare Erbrechen der Schwangeren. *Berliner Klinische Wochenschrift*, No. 40, 1889.

†Weiss: Menthol gegen Erbrechen Schwangerer. *Therap. Monatsh.*, p. 56, January, 1890.

‡Drews: Menthol gegen Hartnäckiges Erbrechen Schwangerer. *Therap. Monatsh.*, p. 375, July, 1890.

§Kaltenbach: Ueber Hyperemesis Gravidarum. *Münchener Medicinische Wochenschrift*, No. 43, 1890.

‖Lomer: Ueber Hyperemesis Gravidarum. *Centralbl. für Gynäk.*, No. 43, 1891.

¶Keil: Casuistischer Beitrag zur Lehre von der Ætiologie der Hyperemesis Gravidarum. *Münchener Medicinische Wochenschrift*, No. 41, 1891.

**Weil: Zur Anwendung des Menthols gegen Hyperemesis Gravidarum. *Centralblatt f. d. Ges. Therap.*, volume viii, 1892.

*One case of chronic gastric catarrh with vomiting and diarrhœa; another of acute cholera morbus, and a third case of simple acute diarrhœa.

by R. Koch, who showed that the peppermint oil is capable, even in the dilution of 1 to 2000, of exterminating cholera bacilli.

THE TREATMENT OF CHLOROSIS.*

BY DOCTOR P. LE GENDRE.

When diagnosing, in a little girl at the moment of puberty or even as early as the sixth or tenth year, in families exhibiting hereditary tuberculosis, the rational symptoms and the physical signs of anæmia, we must first assure ourselves that there exist none of the symptomatic anæmias engendered by organic disease (pulmonary, cardiac, digestive), which may simulate chlorosis. It is well to count the globules and to estimate the hæmoglobin, in order to determine the intensity of the blood lesion, and to be able to follow by exterior examinations the course and the interruptions of the reparative process.

Treatment should not be restricted to the administration of iron, though it has been proved that the intervention of this medica ment is indispensable to rapid and, especially, definitive cure (Hayem).

We must weigh well the form in which iron is to be prescribed, at what moment in the morbid evolution—what medication should precede the martial medication (to assure a maximum of benefit), or what should accompany it to insure tolerance.

Almost all chlorotics are dyspeptic, but some are so slightly dyspeptic as to give ground for hoping that the direct treatment of the chlorosis will dispel this mild dyspepsia, dispensing with the necessity of a special preliminary treatment therefor. Most chlorotics suffer from gastric atony, which often reaches the point of gastric dilatation accompanied with hypochlorhydria. Many, however, suffer from an excessive secretion of hydrochloric acid, at least intermittently, with paroxysms of pain when the stomach is empty. Such are exposed to the danger of gastric ulcer. It may be well in dubious cases to investigate what chemical processes are at work in the stomach; but never when gastric ulcer is to be feared.

With chlorotics suffering from gastric atony and the symptoms of hypochlorhydria—torpid digestion without pain during the first three or four hours, then unsavory, tart or nidorous eructations—occasionally, tardy pains (four to five hours after eating) due to the formation of organic acids in the midst of the stagnant chymous residues occupying the inert stomach,—with such, the following measures are needful:

Before eating, the simple bitters (gentian, quassia), or the excito-motors of contractility in muscular fibre (strychnine, brucine, in the form of tincture nux vomica):

At the close of the repast or a half-hour later, the hydrochloric lemonade, containing 3 to 4 per mille of acid, dose varying from a wineglass to a large glass. The hydrochloric lemonade may be absorbed through a glass tube or a straw, if it be desired to protect the teeth, the enamel of which is very sensitive to the corrosive action; or its ingestion may be followed by rinsing the mouth with an alkaline solution.

With chlorotics suffering from gastrectasis, it is proper to administer salicylate of bismuth or chloroform-water three to four hours after meals.

In cases giving ground for assuming the existence of hyperchlorhydria, administer bicarbonate of soda and the antacid absorbent powders an hour and a-half or two hours after eating, without hesitating to increase the dose until the gastralgia is dispelled.

Bicarbonate of soda,
Prepared chalk,
Calcined magnesia, } each 30 grains.

Mix and make ten powders; take one every quarter-hour.

The selection of the food is to be based on the following double principle: Permit the chlorotic to eat whatever he craves, excluding, of course, any downright imprudence, such as pastry or acids (in case of hyperchlorhydria). Alcohol, pure wine, and hence all the elixirs, are hurtful to gastropathic chlorotics. Milk, pure or diluted with alkaline waters, and beer are much more suitable.

Be careful not to exhaust the little energy at the disposal of these patients by imposing on them, under pretext of exercise, long promenades or gymnastics. Repose in the open air and, at times, a reclining position

* Translated by Joseph Helfman from the *Revue de Thérapeutique*.

after eating, and short, graduated promenades on level ground, are far more desirable.

General daily frictions, dry and aromatic, will facilitate the cutaneous circulation, will combat the tendency to chill, and stimulate the nervous centres by reflex action.

A serious and too common error is to send chlorotics to the sea-coast or to excessive altitudes. The result is generally a rapid aggravation of the asthenia and an augmenting destruction of the globules. The level country first; then the forests; later on, medium altitudes of 1,500 to 1,800 feet when the malady is progressing to a cure—this is what they most require.

Inhalations of oxygen are useful, as are also baths of compressed air in the cities possessing facilities for aërotherapy. I have observed remarkable, rapid, and definitive cure to follow this treatment with compressed air in cases wherein the other modes of treatment had proved futile or had not prevented relapse.

Now, with respect to iron: The rules which should govern its administration involve the choice of a readily assimilable preparation, a variation in the products administered (for there is no one which may be continued with profit up to the termination of treatment), and the precaution to inculcate the administration of the iron in the midst of meals to preserve the gastric mucous membrane as far as possible from its contact.

Among the desirable preparations are those with chlorine base: the ferrous protochloride and the perchloride of iron.

After many trials, M. Hayem has reached the conclusion that the proto-oxalate is one of the best. The ferrous salts of organic-acid base are very advantageous: the ferrico-potassic tartrate, the citrate and lactate of iron. The preparations with peptone base have been highly recommended. Reduced iron has yielded good results. The ferruginous mineral-waters may be utilized.

Constipation should be guarded against and overcome by the vegetable laxatives (cascara, rhubarb, podophyllin), and the excito-motors of intestinal contractility associated with the ferruginous agents by irrigations of the large intestine.

Hydrotherapy constitutes a precious auxiliary—from the cold ablution and the wet cloth, to the douche and simple or broken jet. And yet it must be cautiously used in very feeble or excitable chlorotics. Sulphurous and saline baths also render great service.

Paris, France.

ABDOMINAL TUMORS.

BY F. BYRON ROBINSON, B.S., M.D.

All tumors of the abdomen grow toward the umbilicus because that is the direction of least resistance. By an abdominal tumor is understood any abnormal enlargement found within the abdominal cavity.

The first essential in diagnosing a pelvic or abdominal tumor is a clear knowledge of regional anatomy; we must know where the organs lie; and the most difficult of all anatomy is that of the abdominal viscera, because of the mobility without displacement, because of the capacity of the viscera to alter conditions without destroying integrity, and because of the great elasticity.

It is well known by practical gynæcologists that one cannot readily differentiate tumors in the abdomen. Certain regions are more liable thereto than others, *e.g.*, the pelvic and pyloric regions. One must learn to put the finger exactly on the living organ and know its consistence and "feel" in all conditions; he must know which organs are commonly disturbed, and at what time of life such disturbances arise; and while it is well to be aware of rare tumors, it is those of common every-day variety that we must expect to meet. It is well to bear in mind, also, that sex makes some differences, for women have gall stone four times as often as men, and the latter suffer from appendicitis four times as often as the former; again, man suffers with inguinal hernia from three to four times as often as woman. In regard to age, myoma occurs between thirty and forty, and cancer chiefly between forty and sixty. Tumors in the pelvis belonging to the appendages occur during the child-bearing period, and, as before remarked, localization is apt to be very difficult on account of the mobility of the viscera. I once thought I had made a very careful diagnosis of a tumor in the cœcum, but autopsy revealed cancer of the sigmoid instead—the mobile sigmoid had floated over near the cœcum. As to intesti-

nal tumors, one must not forget the landmarks of the digestive tract; he must look out for the sphincters, viz., rectum, cœcal valve, and pylorus.—Growths are liable to arise at sphincters on account of activity of functions due to complex blood and nerve supply. Malignancy flourishes in such places. Then the flexions of the canal must be remembered; growths arise at flexions because as the fæces pass around a corner of gut the short objects therein abrade and scratch the mucous membrane, and so-called infection gets into the gut wall or peritoneal cavity. Thus swellings and exudates arise at such flexions as the hepatic, the splenic, and the sigmoid.

On the right side of the body, abdominal tumors are difficult to diagnose because of the close proximity of several organs which are liable to morbid growths. If one takes a silver dollar and places it on the right side of the body just below the ribs, it can be made to touch six organs, viz., pylorus, pancreas, supra-renal capsule, kidney, gall-bladder, and hepatic flexure of colon; and each of these may give rise to a tumor. In such a region the practical gynæcologist is very cautious as to announcing definitely which organ is affected. Hence beware of varied tumors on the right side.

On the left side, the spleen, the tail of the pancreas, the splenic flexure of the colon, and the fundus of the stomach can all be touched by a silver dollar in a normal person.

The tumor that is mixed up with all others in the pelvic region is the ovarian. The pelvic tumors mistaken for each other are the ovarian, parovarian, kidney, cœcal, and ectopic pregnancy. At a post-mortem I once found the gall-bladder holding a stone as large as a hen's egg, and resting in the right iliac fossa. It is well to bear in mind that tumors have an anchorage; they arise from distinct locations and distinct organs, and take origin in distinct tissue, though secondary modifications involve adjacent structures. Now the anchorage of a tumor is its base or pedicle, and the length of the pedicle is what gives difficulty in diagnosis. A short-pedicled tumor is frequently easy to diagnose, while a tumor with an elongated pedicle is very difficult because the tumor itself does not always stay at home. The tumors which frequently have a pedicle are those of the gall-bladder, the kidney, parovarian, and ovarian; in this class also fall volvulus of the sigmoid, cœcum, and small intestine. In diagnosing a tumor of the gall-bladder, one should examine the patient while both standing and lying in order to secure changes in the position of the growth; again, while the patient stands the examiner should endeavor to move the tumor on its pedicle as a radius; this can frequently be done. In tumors of the pylorus, very little pedicle or mobility will be found, but since most growths in this region are malignant, the patient is so reduced in flesh that one can usually outline the greater portion of the circumference. We may have the kidney displaced with a short pedicle, but when out of its original bed it is apt to be held bound down as the result of inflammation; the movable kidney is quite common in women, on the left side, especially those who have borne many children—it is simply a kidney with an elongated pedicle, viz., the renal artery, veins and nerves, together, so stretched out that it floats around a wide area. The "floating" kidney is one covered with peritoneum like the gut, and has a mesentery, and is not only congenital but very rare. All kidney tumors are of a round form and easily glide under the hand if they have a pedicle; and it must not be forgotten that the kidney frequently falls in the pelvis. It should also be borne in mind that all tumors with pedicles may rotate upon their own axis, and that movable and floating kidneys are no exception, hence one must be alert to the idea that a suddenly arising tumor may be from the rotation of a tumor on its pedicle or axis, and that such rotation if occurring in the kidney will quickly produce swelling and enlargement. If the tumor be a pedicled parovarian cyst, its rotation on its axis will cut off the return venous current while the arterial current will pump right on into the tumor, so it will quickly swell to large dimensions.

The spleen may enlarge, but one soon finds its nature by the notches along its edges, and by introducing the fingers under it. One able surgeon had made a curious mistake in diagnosing a tumor: he told me he thought the patient had a sarcoma growing from the

lumbar vertebral column. On examination I found it was the spleen, and confirmed it by a drop of blood placed under the microscope in which many white blood-corpuscles could be seen. The normal spleen is generally beyond the reach of touch, and when its peculiar rounded margin with its single notch becomes palpable under the margin of the ribs, in the majority of cases enough suspicion will be aroused to say it is a pathological spleen; again, an enlarged spleen is nearly always movable.

Percussion will aid in the diagnosis of abdominal tumors. It will help to localize them and to indicate their contents. In all the work of diagnosing abdominal tumors the reader will fully recognize that the anatomy stands first and foremost; that one must comprehend the topography of the abdominal viscera and their relations with each other. The nature of tumors must also be understood—their habitat, methods of growth, and origin. It is not always easy to decide whether the tumor involves viscera alone or abdominal wall alone.—For several years I have urged the establishment of chairs of visceral anatomy, for no one branch is so much neglected or so little understood. It is not the large tumors that will puzzle the abdominal surgeon so much as the little ones—the movable little ones. How often has a small apple-sized tumor slipped under my finger, causing misgivings as to what it was! But the certainty of elimination of errors goes on very slowly with me, and the one element which aids me in becoming more accurate is more acquired visceral anatomy. The small tumor may be found anywhere, and its small size is what adds to the uncertainty of its nature. One may feel in the pelvis a small tumor, that may be an ovary, a parovarian, a kidney, a gallstone in the gall-bladder, enlargement of the spleen, cœcum, appendix, or a tubal swelling; and the only method to diagnose is by analysis and exclusion—a slow, painstaking method. Anatomy, physiology, and pathology here come to the rescue just exactly in proportion to our knowledge thereof. Do not for a moment forget that mistakes are liable to occur. It is well that the diagnosis of the previous physician *be not* asked for.—I remember several respectable physicians once preceded me in the examination of a woman in whom inguinal hernia was diagnosed, and I examined *very* superficially, and with a snap judgment corroborated my predecessors. I operated on that "hernia" that none of us could reduce, and to my never-to-be-forgotten surprise came down on a *swollen inguinal gland!* It is pleasing to my conscience that the patient recovered, as the laparotomists say, "without an untoward event" except those that rose and fell in my mind. Mr. Lawson Tait told me that he once made quite a journey to perform herniotomy, and the operation disclosed simply a swollen gland.

Slowly, by acquired experience, one can diagnose tumors more and more accurately. The one subject that has puzzled me more than any other abdominal work is the diagnosis of pregnancy and to exclude other conditions. I have got possession of a long list of such errors from what we call great men of our day. I made a fatal mistake once myself—fatal on account of a subsequent accident. The many errors in diagnosing abdominal tumors have strongly convinced me that the gynæcologist should be an obstetrician, and that gynæcology and obstetrics should not be separated for the purpose of instruction. One must keep in mind that there are actual matters arising daily in practice which simulate abdominal tumors. I had a woman come to me from Montana a short time ago who had gone the rounds and who said she was pregnant *eleven* months. After careful examination I told her she was not pregnant, but that her increased size was due to superabundance of fat in the abdominal wall and omentum. Some able physicians had diagnosed ovarian tumor, but I was positive it was fat. Another case was sent me as an ovarian tumor, and proved to be only increased thickness of the abdominal wall by fat deposit. While I was a pupil of Mr. Tait, women would be sent frequently who were supposed to have ovarian tumors. He would quickly examine, and with lightning-like decision announce "There is nothing the matter; it's only accumulated fat."

It is well to be on guard so that one will not mistake a full bladder or a mass of fæces for a tumor. Phantom tumors occasionally come to the gynæcologist, but an anæsthetic

will soon dispel them.—Phantom tumors are also recorded in lower animals. The mimicry of pregnancy is often very similar to the real state, and one needs prudence in dealing with such. I have now a patient who for nine months has insisted she is pregnant, and, though she is quite large, I can feel the whole uterus. She has set the day for confinement and engaged an accoucheur to attend her, and I am to be called if needed. She has even informed her neighbors, and brings sterile women to me to cure them as she says she was cured, and points to her pregnancy as proof. She is, moreover, a fairly intelligent woman.

What will tax one is the sudden arising of an inflammatory swelling in some part of the abdomen. But in most cases one should not forget the landmarks when such disturbances arise. If it be in a man, appendicitis will suggest itself; the pylorus, the three flexions of the colon, and the gall-bladder must come in for a share of thought; a kidney rotated on its axis, or other tumors rotating in like manner, may be the trouble; and perforation is liable to arise with any. If the patient is a woman, the Fallopian tubes—the highway of infection—will be first thought of; next the possibility of intestinal obstruction, which will demand very careful study and observation.

There is no royal road to the diagnosis of abdominal tumors; the only effective and proper method to learn is by dissection; by doing post-mortems; by watching a laparotomy; by attending gynæcological clinics; by reading works on the subject. When one diagnoses tumors and extirpates them himself, the highest result is obtainable, a combination of theory and practice; however, it has to be slowly learned.

What shall be done with abdominal tumors when found? It depends on, *first*, the condition of the patient, and, *second*, the physician—his skill and facilities. It may be said that all tumors save the malignant should be removed on account of reflex action which destroys visceral rhythm and nourishment. The irritation of the tumor will be transmitted to the abdominal brain and then sent out to every viscus. It will induce fatty degeneration of the heart; the liver will be disturbed in its rhythm and will make a low grade of tissue-fat; the kidneys will become diseased by reflex action; the digestive tract will be disturbed in rhythm, sensation, and secretion; the lungs will not act smoothly under irritation; and this reflex action will induce indigestion, malnutrition, anæmia, and neurosis. The patient becomes ill and remains ill; and all this damage comes from the presence of the tumor. Again, a tumor may press on other organs and derange them, or become damaged itself; infection may enter, when it becomes dangerous. In general, then, all abdominal tumors should be removed.

But what about the skill of the doctor and his facilities? A trained and experienced surgeon alone should attempt the removal of an abdominal tumor, and certainly only a well trained surgeon should attempt to remove a fibroid tumor; the slightest indications may prove, under operation, the most formidable. It may be said without fear of contradiction that the fatality from laparotomy is much higher in private houses than in hospitals, hence laparotomy should chiefly be done in a hospital. Amateurs lose fully twenty per cent. of laparotomies, while skilled abdominal surgeons lose only about five per cent. These are facts which the beginner should consider who desires to be honest, and who values life. All can learn it if they are willing to pay; but the price to become a laparotomist is great—time, money, dissection, autopsy, clinics, travel, experiments and study, observation and thought. Laparotomy is a dangerous operation and should be surrounded with safeguards. He who is true to himself will be just to a patient; and many unjust acts have been done in amateur laparotomies. What crimes have been committed in the name of laparotomy!!! The general practitioner should not do laparotomies, because laparotomy to-day is a science acquired only by a specialist. Hence the condition of the patient must be examined. Surgical operations on the dying are very unsatisfactory, and the loss of even a dying patient by laparotomy is a black eye to the surgeon and profession. The skill and facilities of the doctor must play a rôle. A beginner should never undertake a laparotomy alone. To be just, a surgeon should have the requisite skill and reasonable

facilities for safety. A laparotomist should thoroughly know general surgery.

Chicago, Ill.

INDISCRIMINATE USE OF ALCOHOLIC STIMULANTS IN DISEASE.

BY D. L. DAKIN, M.D.*

To my mind the most important question in therapeutics at the present day is the value of alcohol in disease. Because this agent is made use of daily by a large portion of the community as an article of diet, its administration in disease is treated too often with carelessness, and it thus forms, without a due consideration of its action, one of our most common prescriptions. If it be said that its frequent use is an evidence of its potency, this is all the more reason why its administration should be watched with extreme care.

We all know it is not exactly decided in what manner alcohol behaves in the animal economy; the proof is wanting that it is a food for the lungs, whereas its direct effect on the nervous system is evident. A want of knowledge of the precise change which it undergoes in the system is, however, no argument against its use, since its advantage must be discovered from experience *alone*. If taking of a stimulant restores a flagging nervous force, and so adds fresh life to the various organs of the body, a benefit may have been received, and thus most of us are brought up in the habit of taking our glass of wine, and feel ourselves refreshed. But the greater the quantity ingested, the more prompt and the greater the following depression, and the physiological actions over reach.

Since the active agency in many of our stimulating drinks is alcohol, many persons have recourse to spirits in order the better to obtain its influence, and thus brandy may become with them a regular article of diet, the necessity for some stimulus being assumed; if malt liquor or wine be supposed to disagree, some brandy and water is drank instead. I am not going to enter upon the much vexed question as to the necessity for the daily use of wine or spirits, but I will say that the usual test for the advantage of its use is one which I conceive to be in most cases utterly valueless. Alcohol, remember, although an excitant, is a sedative to the nervous system—is, in fact, an anæsthetic. A drunken man may be injured in such a way as to have all his teeth knocked out in a brawl, yet apparently not perceive the injury, and be utterly unconscious of the occurrence when he has returned to soberness. The argument, therefore, that a man feels better after his glass or two of grog, would be equally applicable to the case of the Oriental who feels better for his opium: his feeling better simply means that he has got rid of his unpleasant sensations, whether these be moral or physical; he "drowns his trouble in the bowl."

The question of the advantage attending the daily use of beer, wine, or spirits, although a difficult one to solve, is one which cannot evade consideration, since the health and welfare of families may depend upon your judicious decision. One may recommend wine with advantage to members of certain families having peculiar temperament, whilst should it be advised for others it may unwittingly be sowing the seeds of ruin of mind, body, and estate. But the matter I wish to strongly enforce is, that we ought as thoroughly to consider the propriety of the administration of alcohol as we would of any other drug, and endeavor, if possible, to erase from our minds that it is a proven fact that alcohol is a tonic or a necessary part of everyone's beverage. As stated before, unless used as other medicine it is a "poison:" Stimulating the flow of gastric juice, it also induces subacute gastritis, and wakefulness; it passes rapidly from the stomach into the portal circulation, and here stimulates the hepatic cells and in time causes fatty degeneration in that organ.

It is assumed to be necessary by a large mass of people, as is understood by the question which the patient puts when he inquires: "What shall I drink? Shall I take a stimulant or leave it alone; shall I drink beer, wine, or spirits?" You might ask to what complaint do I refer when I speak of this too common advice, but I need only repeat the word "patient," for it matters little what is the nature of the disease, since the reasons for the treatment are applicable to

* Read before the Wayne County (Mich.) Medical Society.

all complaints, and are founded on this simple proposition: All persons who are ill are weak, have lost strength, and consequently require it to be restored; alcohol is a supporter and a tonic, therefore alcohol is a remedy for all diseases. Brandy, indeed, becomes with some as much a universal remedy as any quack medicine. Now, in the case of fevers and bronchitis, the weak pulse is often but an indication of extreme capillary congestion, and a stimulus to the heart only aggravates the evil; and in the case of a diseased and weak heart, where repose is indicated, a constant stimulation by alcohol adds immensely to its trouble. It is surprising to see how the effects of stimulation are overlooked. Not many years ago the antiphlogistic method was adopted, including bleeding, antimony, calomel, etc.; then came the "let alone" method; and now we have the brandy treatment without any "let alone" method.

It is not only in these severe cases of disease, but in lesser trouble, that your recommendation of stimulants may do mischief. You visit, for example, an ailing lady, and she details to you a number of troubles of a nervous and dyspeptic character. She is sitting indoors all day, taking no exercise, living well, and consequently drifting into a weak and flabby condition. You place your hand on her pulse, and, finding it feeble, condole with her on her state of health, assure her that she does not live well enough, and order her a few extra glasses of wine or a "little" brandy. When in this way a patient is ordered a "little" brandy, the adjective in no way qualifies the amount. You find that she grows no better for the advice, but perhaps never reflect that you have been adding fuel to the fire. Knowing not what to do in the way of treatment, you order her out of the city, and she immediately begins to improve. She goes to some resort, rides on horseback or walks miles a day on the ground, regains her appetite, craves less for stimulants, and her health is restored. If, on the contrary, you fail to remove her from her house, she goes on from bad to worse, takes to her bed, eats less food, drinks more wine and brandy, until, having become one mass of fatty degeneration life can hold no longer, and death ends the scene. Therefore I cannot assume that alcohol is an equivalent to a tonic and that it must be necessarily administered because the patient is weak. It may be that very weakness is due to the long-continued use of that same stimulant.

Whatever may be thought of the remarks just made, there is one thing that should have careful consideration: When treating any malady, and the administration of alcohol is suggested, give the same consideration to its recommendation as to any other *medicine*. Do not sit down and give all serious thoughts to the question of whether a certain quantity of this or that drug should be ordered, and then at haphazard order any number of ounces of spirit! I say nothing against the potency of alcohol in several states of disease; but I do speak strongly against its indiscriminate use without due consideration of its need or of its result. My arguments would equally apply to opium or any other drug if indiscriminately used as a universal medicine. Now place alcohol in the list of drugs so that it may be administered with the same caution as the rest.

Detroit, Mich.

Society Meetings.

WAYNE COUNTY MEDICAL SOCIETY.

The regular meeting of the Wayne County Medical Society was held in the Cowie Building, Detroit, on Thursday evening, March 1st, with the Vice-President, Doctor E. B. Smith, in the chair.

A communication was received from Typographical Union No. 18, requesting the Society to endorse the position taken by the International Typographical Union in support of a bill before Congress providing for the establishment of government telegraph lines. On motion, the resolution adopted by the International Typographical Union, calling on Senators and Representatives in Congress to support the bill, was so endorsed.

A paper on "The Indiscriminate Use of Alcohol in Disease" was presented by Doctor D. L. Dakin, who condemned the practice of prescribing alcoholic stimulants as utterly useless in the majority of diseases and absolutely dangerous in others.

Doctor Thomas Henderson stated that Doctor Bucke, on assuming the superintendency of the London Insane Asylum, had en-

tirely discarded the use of alcohol as a stimulant. The change resulted in a lower rate of mortality than had before existed, proving that alcohol was not only unnecessary but absolutely injurious.

Doctor Kenneth Gunsolus strongly condemned the use of liquor in many cases where it is now frequently prescribed. He considered that as it is neither a food nor a tonic, its use was unnecessary except in some asthenic cases. He believed that hot milk was a more valuable stimulant, and in typhoid fever had had better results with it than with alcohol.

Doctor L. E. Maire believed for the anorexia and sleeplessness of consumption alcohol was valuable, and also in other conditions if temperance was made the rule.

Doctor O. S. Armstrong had never seen a case of diphtheria not benefited by alcohol, and also considered it valuable in selected cases of pneumonia and typhoid fever.

Doctor Samuel Bell related his observations of gastric digestion in the stomach of a patient with a gastric fistula. It was found that two causes of delayed or disturbed digestion were deficient secretion of gastric juice and an abnormal amount of mucus in the stomach. Alcohol was found to precipitate pepsin and coagulate albumen when used freely, but stimulated the secretion of gastric juice and assisted the assimilation of food when used in proper doses. He believed that the stimulating effect of alcohol upon the heart was dangerous in pneumonia.

Doctor W. R. Henderson said that such a potent and dangerous medicament as alcohol should be prescribed with great caution, and that great harm was done by its indiscriminate use.

Doctor T. J. Parker had found it very beneficial in the support of diphtheritic patients, and believed that the most of the harm done by it could be attributed to its abuse by people without the permission or advice of their physicians.

Doctor D. O. Donovan did not regret the use he had made of alcohol in his practice. He considered it almost absolutely necessary in some cases, and had never known that his advice had made a drunkard of a patient.

Doctor R. H. Honner said that if physicians would prescribe only when stimulation was necessary, and then prescribe it as regularly and cautiously as they prescribe other powerful medicines, no harm would be done. He had never known a drunkard who was made so by a doctor's prescription, and did not believe that such cases could be found. He considered that the inevitable depression following over-stimulation is a dangerous period in a patient's life, a period during which heart-failure is likely to occur. The physiological study of alcohol has shown that it is not a nutrient, and its apparent nutritive effect is due to its preventing rapid tissue waste.

Doctor E. B. Smith believed that alcohol is often used injudiciously in surgical cases, particularly in the shock produced by genito-urinary, rectal, and abdominal surgery.

Doctors Gunsolus, Parker, and Bell reported cases of exanthematous fever with infiltration of the glands of the neck, the diagnosis of which gave them some trouble.

Doctor Thomas Henderson said he would diagnose these cases as German measles. Doctor Honner agreed with Doctor Henderson, as he had recently seen ten or twelve such cases which he had diagnosed as German measles. Doctor Gunsolus said that the appearance of the rash induced him to exclude rötheln.

Doctor Smith suggested a provisional diagnosis of erythema with adenitis which he had given in a case of his.

Doctor Smith also reported a compound comminuted fracture of the humerus with rupture of the brachial artery and cephalic vein. He had observed that when a bone is broken near the entrance of the nutrient artery, union is often retarded or prevented, a fact not mentioned in the text-books. Union may also be delayed by the use of alcohol.

The Society then adjourned to meet on March 15th, when Doctors Gunsolus and T. Henderson will present papers on obstetrics and surgery.

R. H. HONNER,
Secretary.

Detroit, March 6th, 1894.

ANCIENT VACCINATION.

At a recent meeting of the Epidemiological Society of London, Doctor Pringle called attention to the following passage in an ancient Hindu work as evidence that vaccination was practiced in India centuries before the birth of Jenner:

"The smallpox produced from the udder of the cow will be of the same mild nature as the original disease; the pock shall be of good color, filled with clear liquid, and surrounded by a circle of red. There will be slight fever for one, two, or three days; and no fear need afterwards be entertained of smallpox so long as life endures."

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Editorial.

PROFESSOR LEISHMAN.

Professor Leishman, the author of "Leishman's Midwifery"—the text-book *par excellence* twenty years ago—is no more. Thousands have felt the pleasure of conning their Leishman, which was a notable exception in the list of text-books, since such are not pleasurable reading as a rule; another thousand or so may be added to the number of pupils who during the last quarter of a century have had the privilege of personal instruction by the Regius Professor of Midwifery in Glasgow University, where his wonderful faculty for imparting knowledge drew large and enthusiastic classes.

Doctor Leishman's death took place on Sunday, the 18th ult., at Blairmore, Loch Long, at the age of sixty-one. He had resigned his chair but a few months before on account of hemianopsia; but the malady was deemed but of temporary moment, and it was supposed that some years of labor yet remained before him.

The deceased was the second son of the late Doctor Leishman, of Govan, and a distinguished graduate of Glasgow University, and while still a young man was invited to join the staff of Anderson's College, and about the same time was also selected as one of the physicians to the Glasgow Royal Infirmary. In 1868 he succeeded Professor Pagan as Professor of Midwifery. In all his public appointments his duties were discharged with thorough earnestness, and when moved to speak in public he did so in a manner which commanded respect.

In the Royal Infirmary his clinical classes were invariably crowded, his lectures being unsurpassed models of conciseness and elegant diction; and his bedside teaching was equally clear, pointed, and thoroughly scientific.

POTASSIUM PERMANGANATE AS AN ALEXIPHARMIC.

Owing to its oxydizing effect, Potassium Permanganate has frequently been suggested as a general antidote to poison. As is well known, owing to its rapid oxydizing properties it readily decomposes all alkaloids, a fact that is repeatedly taken advantage of in the chemical laboratory.

Now comes a physician of New York who declares this salt is a perfect antidote for morphine—a claim that for various reasons, chemical, pathological, and physiological, must be accepted cautiously. The fact that the individual ingested three grains of morphine, following quickly with potassium permanganate, without untoward effect, goes for little—doubtless zinc sulphate or ipecac in emetic doses would be equally effective. But in cases of morphine poisoning, the alkaloidal salt has usually passed beyond the stomach and a large portion thereof been absorbed into the circulation. To expect potassium permanganate not only to follow, but to overtake the poison, thus neutralizing it in the blood current, is, to say the least, somewhat far-fetched. Experiments upon dogs, which are cited in support of the foregoing contention, moreover, prove very little; while some canines are very susceptible to opium in its integrity, most are to a considerable degree "refractory" to the morphine alkaloid and its salts. The expectations thus raised because the permanganate is a rapidly oxydizing agent are not borne out by the employment of the rationally more potent pure oxygen. And while we do not advise anyone to forego the use of permanganate, we would urge more strongly that other and more classical methods be not neglected.

Permanganate is also considered an antidote for phosphorus. Antal, Haynes, and Erdos have experimented extensively therewith, and the former declares dogs poisoned by phosphorized milk recover completely in two hours after ingesting considerable quantities of permanganate solution varying in strength from 15 to 50 per cent., while others under like circumstances, but that did not receive the antidote though they had the stomach washed out, speedily succumbed; on the strength of this he recommends for phosphorus poisoning the ingestion of from one

to two quarts of a one-fifth to one-third per cent. solution, the dose to be repeated if necessary.

Haynes, in two cases of acute phosphorus poisoning, deluged his patients' stomachs with one quart of a one-tenth per cent. solution, with the result there was only slight nausea, and the victims left the hospital cured in a few days. Erdos, in one instance, had equally good results, one gallon of a one-fifth to one-tenth per cent. solution being used. The patient recovered in ten days.

It must be obvious that the value of permanganate depends entirely upon its property of parting with nascent oxygen; that further success may be expected only when the period intervening between the ingestion of the poison and the antidote is very brief. Little could be expected in either phosphorus or morphine poisoning where the toxic effects of the drugs are prominently manifested.

OVULATION AND MENSTRUATION.

Lawson Tait calls attention to a remarkable paper by Mr. Walter Heape, Balfour Student of the University of Cambridge, concerning the "Menstruation of *Semnopithecus Antellus*," just published in the Proceedings of the Royal Society. In this paper the declaration is made that "out of the ovaries of forty-two specimens of menstruating *S. antellus*, only two were found in which recently discharged follicles were seen. Such a result appears to be sufficient to warrant the statement that ovulation does not necessarily occur during each menstrual period, and that menstruation is not brought about by ovulation." The facts brought to light by Mr. Heape completely confirm the opinions previously formulated by Mr. Tait, the conclusions in both instances being identical.

PURE COCAINE.

Though Cocaine has been known as a valuable agent for some years, it is only lately that knowledge of the physiological effect of its accompanying amorphous bases has been materially widened.

Concerning the principal alkaloid Cocaine *per se* it is not necessary to speak, because it is familiar to the medical profession the world over in the form of a salt; but of the number of so-called secondary or amorphous alkaloids, chemists even at this late date are somewhat doubtful. There are known to be several, and recent researches on the part of Liebermann, Liebreich, and others, prove that one of these amorphous alkaloids, viz., Iso-Atropyl-Cocaine, is a most violent cardiac poison. This alkaloid occurs in coca leaves in very minute quantity, as a rule, but some specimens contain far more than others; its separation is most difficult, and it enjoys the reputation of being the least easily detected of all the coca bases. Even if we were not positive that the secondary bases exhibited a pernicious effect, they must be looked upon as suspicious, and a Cocaine demanded from which they are removed. As a matter of fact, we do know that the presence of even small quantities of these amorphous bases is responsible for untoward and seemingly inexplicable results that often follow upon the administration of supposedly pure Cocaine preparations.

Recently the editor of the MEDICAL AGE learned of two apparently mysterious deaths which were in reality the result of the use of impure Cocaine by dentists for its benumbing effect in the extraction of teeth—in both cases the drug was injected into the gum. In one instance death occurred within a few hours after the teeth were drawn; in the other the lady lingered for about thirty-six hours, and all the resources of the medical art were unable to stimulate a heart that had been fatally poisoned owing to a preponderance of Iso-Atropyl-Cocaine.

Such facts as just cited should prove sufficient to put the practitioner on his guard and induce him to demand a Cocaine that is free not only from secondary alkaloids, but from such inorganic substances as sodium, calcium, etc., that are necessarily employed in the process of manufacture.

"BELLY-RIPPERS."

One of our Southern contemporaries comments as follows upon the rage for abdominal operations:

No month passes by but that one or more of our exchanges contains reports of laparotomies in the median line (?)—ovariotomies,

etc., performed by unknown celebrities—reports that contain nothing new in operative technique or after-treatment, that really convey no other information than that the reporter has operated upon a certain number of cases with certain alleged results; reports that, in view of their evident self-advertising purpose, are of little value even as statistical material. The average practitioner, when he comes to a contribution of the kind, looks at its title, mutters "chestnuts," or something more forcible, and shows his good sense by passing to the next article.

Not only are such reports devoid of practical value, but they even fail in the accomplishment of their purpose of advertising the operator as a skillful surgeon, since this class of operations can now be performed by any third-class surgeon if he has only the temerity which third-class men usually possess. We have read of even a cow executing a laparotomy with good after-results, and may all, therefore, take it for granted that Tom, Dick and Harry can rip bellies successfully, without giving them from three to thirty pages of valuable space in which to herald the fact, which is wonderful or even interesting to no one but themselves.

Join us in asking the now Ancient Order of Eminent Belly-Rippers to "give us a rest," and if they are unwilling or unable to do so, to start an organ of their own in which they can "swap lies" to their hearts' content, without roiling the feelings of more than ninety-nine per cent. of readers.

The foregoing is somewhat aggressive, but nevertheless carries its due measure of truth. There seems to be a rage for all new operations, and those within the domain of abdominal surgery certainly have not escaped. Within a twelvemonth nearly a score of operations have come to our notice that were utterly uncalled-for. It is not long since we knew the abdomen to be opened, purportedly for the removal of a tumor, when before the operation it was well known such tumor could not be meddled with. The operator, however, was able to add one more to his long list of operations.

Certainly it is time a halt was called in the matter of operations "for a record."

ERECT POSTURE IN GYNÆCOLOGY.

Doctor Dewees urges the importance of making gynæcological examinations with the woman in erect posture, particularly when it is desired to accurately determine the nature and extent of displacements, as these are then apt to be more marked and more easily defined. A pessary which may appear to support the parti-wall while the patient is recumbent, may be found of no value when the erect posture is assumed. Other conditions for which these methods of examination are advised are: Vesical and rectal disorders; lack of perineal and vaginal support; ovarian and tubal diseases; abdominal and pelvic tumors; differentiation between abdominal tumors and pregnancy.

THOSE TROUBLESOME ADVERTISERS.

The Philadelphia *Polyclinic*, after calling attention to a quotation from a Western journal which is a confession of weakness as to so-called "reading notices" forced on unwilling editors by wicked advertisers, pays its respects to Br'er Wile, of the *New England Medical Monthly*, the self-constituted champion of the great "Retired," as follows:

Our attention is now attracted by a wail from New England about the "peculiar methods" of the advertisers of certain proprietary medicines; such advertisers having resorted to the daily papers and "bill boards along the line of the New York and New Haven Railroad," instead of confining their operations to the pages of the medical journals which live on such advertisements.

The medical publisher recognizes quickly and responds vigorously when his "ox is gored;" but the profession is so long-suffering that its interests are in danger of being forgotten altogether.

Every doctor ought to recognize that the proprietary medicine, when it has established a reputation, finds its most natural and profitable outlet through the counter prescribing druggist and the columns of the newspapers; and that whenever he helps to build up the reputation of such a preparation he is working against the financial interest of his profession, as well as in opposition to the progress of science and the good of humanity.

On the same page with this wail about peculiar methods, the medical monthly to which we refer publishes the circular of the makers of another nostrum, threatening vengeance on certain druggists who had been guilty of substitution. It is likely to happen that when these gentlemen see the medical profession has recommended sufficiently their particular "ine," and times are dull and

something needs to be done to liven business up, that they will follow their numerous predecessors and appear on the bill boards and in the daily papers, to the emptiness and regret of the medical journals that now serve their interests.

We wonder what our New England friend can offer in extenuation of the fact the ex-Surgeon-General, in the *Chicago Herald* of March 8th, not only advertises Animal Extracts, but specifically offers Cerebrine as a cure for locomotor ataxia and epilepsy.

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Also, in a recent issue of the *Medical News* the erudite editor, Doctor Geo. M. Gould, unbosoms himself in the following emphatic manner regarding the traffic in "cure alls:"

Of late a particularly nauseating mess about "substitution" and the dishonest druggist is made to appear editorially in numberless medical journals, and the whole end and aim of the rigmarole is a laudation of several proprietary and secret nostrums. Advertiser and editor are sharp enough to change the title in each periodical, but that is all the change except the bribe money. "A Too Common Affront to the Profession," "Dishonest Druggists," "The Evils of Substitution," and other such are the hypocritic titles of the more hypocritic "ads." In a month or two a new stereotyped form will appear and run its course in the usual manner. We are thinking of making a list of these advertisers and of their slavish journals, and of putting them all in the pillory of publicity. The medical profession should know about these things. The practice is proof positive of the worthlessness of the nostrum thus advertised, the immorality of the advertiser, and the combined worthlessness and immorality of the journal thus prostituting itself.

This is no less pointed than true, and the situation is most tersely summed up. It certainly would be of benefit to the medical and pharmaceutical professions if some one would place in the pillory of publicity just such a list as threatened.

ELIXIR KOLA COMPOUND.

Recently has been introduced a new preparation under the title of Elixir Kola Compound, which apparently offers unusual opportunities in the way of a stimulant, stomachic and anti-dyspeptic nervine and reconstructive. It is made up of Kola, Coca, Celery Seed, sugar, flavoring, etc.,—the Black Haw called for by the National Formulary is omitted because of obnoxious flavor and because it adds nothing to the value of the mixture: thus one fluid ounce represents forty grains each of Kola Nut, Coca, and Celery Seed. For the promotion of assimilation and as a gentle stimulant tonic and reconstructive following continued fevers, this combination will undoubtedly prove most satisfactory; further, it possesses an advantage over other preparations of its class in that it possesses a most palatable flavor.

BROMELIN.

Señor Vincente Marcano, of Carácas, Venezuela, discovered that plants of the natural order Bromeliaceæ contain a proteid-digesting principle similar in effects to pepsin. The common pineapple is the best known representative of the family in question, and the discovery therefore constitutes a scientific endorsement of empirical reports of the efficacy of the juice of this fruit in the treatment of diphtheria and diphtheritic sore throat. The ferment as segregated from the pineapple is known as Bromelin, and has been found to possess extraordinary powers in the solution of proteid matter, and its use apparently has confirmed all that has been said in praise of pineapple-juice.

In using this preparation, which is simply a concentrated representative of the juice of the fruit, it should be diluted to such a density as to be easily thrown through an atomizer or taken by the patient as a gargle. Contact with the diseased tissue for as long a period as possible is to be desired, in order to attain the best results. It is not advisable, however, to dilute more than is required for each treatment, otherwise fermentation will destroy the proteolytic principle.

EDITORIAL NOTES.

To be Taken Cum Grano.—

H. D. Cook, who was with the Peary polar expedition, declares that the natives in Greenland see objects upside down; that their brains are not educated to take up the

inverted retinal image and set it aright in the mind's eye. Photographs and pictures they invariably turn upside down for examination.

This is probably on a par with sailors' yarns regarding the genitalia of South Sea Island women.

The Origin of Tetanus.—

Le Blanc declares he has seen a great many cases of tetanus among horses, but, despite the most careful researches, could not always determine its source. He has, however, proven most satisfactorily to his own mind that cold plays a very important part in the development of the disease—in many instances, at least. Chauveau also relates several instances in which the action of cold had manifest influence in causing a spread of the disease among both human beings and animals.

Adonidin.—

This glucoside, introduced as a cardiac tonic, is alleged to cause copious diuresis with improved heart's action. It does not, however, act on the heart like the digitalis group, but is a poison to the medulla oblongata. Its favorable action on the heart in dropsy is probably due to the diuresis it causes, as it is a well known fact that if dropsy due to cardiac disease be relieved by diuresis or catharsis the condition of the heart quickly improves.

Infant with a Tail.—

Doctor Julian Berry writes the *Memphis Medical Monthly* that on attending an accouchement he was surprised to find the infant "blessed with a tail—a nice, well formed tail—a tail just where a tail ought to grow—a five-inch tail." Amputation was "reluctantly performed."

Sodium and Gold Chloride.—

The double salt of Sodium and Gold is advised in that form of Bright's disease wherein but little urine is passed. It is said in such cases, and where there are no uræmic symptoms, its persistent use will sometimes accomplish most wonderful results.

Items and News.

The Grinding of Specialists.—

Lenses are ground; so are specialists. It is one of the many absurdities of our profession that a man can jump, at one fell swoop, and in the short period of four weeks, out of the province of general practice into the seventh heaven of specialism. To-day there is no fact more disgraceful to the medical profession than this. Rotten indeed are many of the medical colleges of this country, but far more harmful are most of the post-graduate schools, polyclinics, and so-called ophthalmic colleges. Most medical schools profess to hold preliminary examinations of those who desire to matriculate; but in the ophthalmic colleges anyone can enter, regardless of lack of learning. It is impossible to condemn in a manner too emphatic the practice of grinding out specialists just as is turned out a grist of meal or a link of sausage. Men without any preliminary education pass a few weeks in an "ophthalmic college," receive an embossed certificate or diploma which heralds their coming to a waiting world, and go forth prepared to destroy vision and impair hearing. Such a condition of things, be it said to our national discredit, is purely American. These half-hatched and abortive products go about the country professing to perform miracles, and really do a great amount of harm. They often prescribe concave lenses for hypermetropia, and order cylindrical glasses for astigmatism without ever putting the accommodation at rest. Nor do they stop here: Many of them boldly cut recti muscles in children the victims of strabismus, where an intelligent practitioner would cure the case by a proper correction of the refractive error. They run up against cases of glaucoma and call them cataract, and talk flippantly about the ophthalmoscope without knowing how to use it. And when they operate for cataract—and spend an hour in trying to extract the lens—may the Lord have mercy on their souls! Such scoundrels, at times, visit all the larger cities, and many of the villages. Nor are all of these men itinerants. We know of such who are holding "professorships." Ye shades of Æsculapius! How little a man must know in order to be a "profes-or." Let him have a few dollars, an adamantine cheek, and *suaviter in modo*, and lo! the trick is turned. Much harm is done by gimlet-eyed jeweler-opticians who learnedly chatter about their cases of astigmatism, hypermetropia, and myopia. No one should begin the study of ophthal-

mology without a most thorough medical education, and then only after having had an extensive experience as a general practitioner, gained either in hospital or private practice, or both. In this way only can there be acquired such a breadth of learning, such a correctness of understanding and facility of resource, as will enable the careful student of ophthalmology and otology to treat his patients wisely. The oculist should never forget that he is a general practitioner in knowledge, if not in practice; and the family doctor should not consider it beyond his province to refresh his memory from time to time on such important subjects as iritis, glaucoma, cataract, mastoid abscess, etc. Thus the family doctor and the specialist can walk hand in hand, to the benefit of the patient and the honor of the profession.—*Tri-State Medical Journal.*

Cell Therapeutics.—

It is sincerely to be hoped that the profession will not be in any haste to endorse the so-called system of cell therapy. That freshly chopped calves' brain, macerated for months in any menstruum whatever, should yield a principle specially corrective or constructive to the diseased cells of the human brain, when injected directly into the circulation, does not accord with any scientific demonstrations hitherto established; and experience bought by deep humiliation has taught, or at least shown us, how utterly valueless an immense array of clinical data may be when collected for the purpose of establishing a preconceived theory. As instances, may be cited operations on the external eye muscles for the cure of many forms of nervous disease; operations upon the uterus and appendages for the cure of insanity; rectal injection of gas for the cure of consumption; and so on *ad nauseam.* None of these ought ever to have been endorsed by the profession as they were, and this so-called cell therapy is even more ridiculous if possible than any hypothesis hitherto put forward, even if it had not been proven by the practice of transfusion of blood under circumstances as favorable as possible that cells composing the tissues of one individual cannot appropriate unchanged those of another, thus giving a direct accession of vitality.—*North American Practitioner.*

The Cat and the Caul.—

Mrs. Johnson, of Philadelphia, recently became the mother of a bouncing baby boy, and when it became noised about that the lusty youngster had come into the world decorated with a caul the happy mother was deluged with congratulations, which she received with becoming modesty, satisfied with the knowledge that her offspring, because of his lucky face-covering, would be free from most of the ills and dangers of ordinary mortals. But in a few days Mrs. Johnson's joy was turned to mourning. The caul had disappeared. Suspicion fell upon a neighbor and professional nurse who had presided over the sick-room during Mrs. Johnson's hours of anxiety. Mrs. Johnson says the nurse stole it and sold it to a sea-captain for fifty dollars. She accordingly had the nurse arrested, and yesterday Magistrate Hackett was stumped by the strange explanation. In her own defense the nurse declared that the Johnson household cat had stolen the precious caul from off the bureau. This story was not credited, but Magistrate Hackett confessed himself in a quandary and held the case under advisement.—*Medical Record.*

Modern Therapeutics.—

I have been reading in the *Journal of the American Medical Association*, and in other American medical periodicals, that various animal extracts, such as "Cardine," "Cerebrine," etc., have been introduced by Hammond. No doubt the great American fakir has gotten the idea, without acknowledging it, from the Arabian fakirs or dervishes who prescribe children's hearts as a diet for saints suffering with imaginary heart disease. One great saint here, whom, as well as whose wives, I number among my patients, I am going to dose with tartar emetic and then refuse to cure him, unless he gives me his snuff-box, which must be worth some $40,000. This saintly hog (or hoggish saint) is reputed to kidnap children and feed on their hearts. Sheep's testicles are eaten here for impotence, sterility, etc; but a Greek doctor is now administering the regular "spermine," and reports wonderful cures.—DOCTOR J. C. SUNDBERG, American Consul at Bagdad, Asia Minor, in *Pacific Medical Journal.*

Scarcity of Medical Villains.—

Doctor Oliver Wendell Holmes, who once made some remarks in reference to a charge that in his writings he drew all his villains from the clerical and legal professions, said:

"I am afraid I shall have to square accounts by writing one more story, with a physician figuring in it. I have long been looking in vain for such a one to serve as a model. I thought I had found a very excellent villain at one time, but it turned out he

was no physician at all, only a—I mean, not what we consider a practitioner of medicine. I will venture to propose a sentiment which, as I am not a working physician, need not include the proposer in its eulogy: The medical profession—so full of good people that its own story-tellers have to go outside of it to find their villains."

Dangers of Piercing the Ears.—

Thorner, in the *Journal of the American Medical Association*, calls attention to pathological conditions that may follow piercing of the lobules of the ears, a custom he considers barbaric. Death has resulted from trismus, erysipelas, and gangrene, while many observers have reported fibroid growths at the seat of injury, which tend to recur and may become malignant. He in his own experience has seen erysipelas, eczema, and tumors including fibroma and keloid, follow, and this leads him to believe that such consequences are more frequent than is usually surmised. He hopes it will speedily be considered an evidence of brutality to subject a child to such an unnecessary and mutilating procedure.

What is Electricity?—

This query, propounded to Professor Galileo Ferraris, evoked the following reply:

"It is not only the formidable agent which now and then shatters and tears the atmosphere, terrifying you with the crash of its thunder, but it is also the life-giving agent which sends from heaven to earth, with the light and the heat, the magic of colors and the breath of life. It is that which makes your heart beat to the palpitations of the outside world; it is that which has the power to transmit to your soul the enchantment of a look and the grace of a smile."

A Poisonous Liquid.—

Brown-Séquard is reported to have informed the French Academy of Science that by condensing the watery vapor from the lungs he obtained a poisonous liquid capable of producing almost immediate death. The poison is an organic alkali and not a microbe or series of microbes. He says it is fully proven that expired air contains a volatile element far more dangerous than the carbonic acid which is one of its constituents.

Typhoid Fever.—

No case of typhoid fever ever recovered that did not finally get a free acting skin; and the sooner we get this the better for the patient. A protracted dry and hot skin, with dry tongue, is not only unnecessary, but ruinous, and sooner or later will be followed by some dangerous complications of this disease. Intestinal hæmorrhage or perforation is especially liable to supervene.—*Medical Brief.*

A Cure for Hiccough.—

The quickest cure on record in the Bellevue Hospital, New York, was that of Jennie Klevanskey, who was suffering with hysterical hiccough. On her way to the alcoholic ward in charge of an attendant, a nurse entered with a strait-jacket. The woman shrieked and declared she was cured. She had stopped hiccoughing, and was immediately discharged.—*Tribune.*

Peptonate of Iron.—

This much vaunted preparation is evidently nothing but a weak, rather acid solution of ferrous chloride, with a little common salt. . . . . It shows a good example of the kind of preparation which trades on a reputation which is belied by its actual composition.—D. B. Dott, F.I.C., F.R.S.E., in *Pharmaceutical Journal and Transactions.*

What the Doctor Gave Him.—

A man went to Dublin to order a coffin for Pat Connell. "Dear me," said the undertaker, "is poor Pat dead?" "No, he's not dead yet," was the reply, "but he'll die tonight, for the doctor says he can't live till the morning, and he knows what he gave him."—*Le Fanu's "Seventy Years of Irish Life."*

"Tit for Tat."—

Servant (*delivering message*): Mr. T. sends his compliments to Mr. G., with the request that he shoot his dog, which is a nuisance in the neighborhood.

G.: Give Mr. G.'s compliments to Mr. T., and ask him to kindly poison his daughter and burn up her piano.—*Texas Siftings.*

A Chinese Prescription for Wry-Neck.—

Obtain a rooster exactly six months old, place him in a cage facing north, feed him with wheat ripened during the full moon, collect his excrement passed on the sixth day, mix it with wine, and take a glassful of the mixture three times daily.—*Medical Press.*

Anæsthetics in Phthisical Patients.—

Patients the subjects of pulmonary phthisis

or other lesion of the air-passages, by which the sensibility of the passages is greatly increased, when having to undergo operations necessitating the use of an anæsthetic, stand chloroform much better than ether.

Cholera Mortality among Moslem Pilgrims.—

During May last over 6,000 pilgrims left Tunis for Mecca, and about 3,000 more sailed from the other ports on the coast. It is estimated that of these, 4,500 persons perished on their way to or from the holy city. —*Indian Medical Record.*

First Japanese Female Physician.—

Recently in Nagasaki, according to the *Deutsche Medizinal-Zeitung*, has been licensed the first female physician, viz., Marie Saganiana, who is said to have obtained her medical education in the United States.

A Centenarian who Smoked.—

Miss Hulda Arnold died at Milford, Mass., recently, at the reputed age of over 104 years. At the age of fourteen she began the use of tobacco to relieve asthma, and thereafter was an inveterate smoker.

Prevention of Blindness.—

Under the law requiring early notification of cases of ophthalmia neonatorum, a conviction has recently been secured in New York. A similar law is likely to be soon placed on the statute books of Ohio.

Sir Samuel Baker.—

Doctor Samuel Baker, the well known sportsman, author and explorer, and who was foremost in suppressing slavery in Africa in 1869 and 1874, died December last in Newton Abbott, England.

Death of Doctor S. Guttman.—

The well known editor of the *Deutsche Medicinische Wochenschrift* died December last at Berlin, aged 54 years, as the result of a virulent attack of influenza.

Soft Soap.—

You oft call flattery soft soap,
And this is the reason why—
Because in it you sure detect
The presence of the *lye*.

—*Puck.*

Increased Course.—

The Hahnemann Medical College announces an obligatory four years' course after October next.

Book Reviews.

THE CANADIAN MAGAZINE. Square 8vo; pp. 100. Price, 25 cents; $2.50 per annum. The Ontario Publishing Co. (L'td). Toronto.

This magazine, devoted to politics, science, and literature, exceeds even our best expectations. There is perhaps no publication of the class in North America which so completely fills the bill of a high-class family magazine of general scope. Moreover, with the opportunities afforded through the Governmental departments at Ottawa it is enabled to present information regarding the geography, topography, and fauna of the remote regions of British America, which otherwise would be locked up among the Dominion archives. In this connection it may be remarked that one of the most interesting descriptive articles that has ever appeared from any source in the English language is "Down the Yukon and Up the Mackenzie," by William Ogilvie. The second volume began with November, 1893, and we do not think we can offer a better review to our readers than to give a summary of contents to date:—*November:* "State Education and Isms;" "Plebiscite;" "Problems of Home Winning;" "The Canadian Movement;" "The Battle of the Eclipse;" "Mirage in Western Canada;" "The Old Bastile of Paris;" "Down the Yukon;" "Beouwlf, the English Homer;" "Banana Culture in Jamaica;" "Peculiarities and Illustrations of Humor."—*December:* "Our Militia;" "The Manitoba School Question;" "La Quete de l'Enfant Jesus;" "Art at the World's Fair;" W. T. Stead on "Telepathy;" "An Hour with Oliver Wendel Holmes;" "John Bentley's Mistake;" "A Christmas Tragedy;" "Salmon Fishing and Canning on the Frazer;" "Humor of the Bench and Bar;" "Down the Yukon, etc.;" "Lord and Lady Aberdeen." — *January:* "Howe and His Times;" "Neglected and Friendless Children;" "Common Telescopes and What They Will Show;" "Vignettes from St. Pilgrim's Isle;" "Irish Scenery;" "Christmas Story;" "An Extraordinary Experience;" "Celtic Monuments;" "Two Lost Kingdoms;" "In Canada's Natural Park;" "William Wilfred Campbell;" "Longfellow's Wayside Inn;" "Neb;" "Cicero's Revenge;" "Haddo House;" "Algonquin Park." — *February:* "The American Indian"—the most complete anthropological *résumé* of its class that has ever been published; "Schools of Olden Times;" "Eldorado of British Columbia;" "Dunfermline Abbey;" "On Board the Aquidaban;" "The Soul-Snake;" "The Cocoanut

Palm;" "Men and Things in Mexico;" "The Journal of a Solitary;" "Gaun tae Glasgow."

Among the authors appear names that rank high in the fields of literature, science, and art, such as John Campbell, David Mills, W. Robertson, Fred T. Hodgson, Allan Eric, Alphonso Daudet, W. D. LeSeuer, E. B. Biggar, William Ogilvie, L. E. Horning, T. V. Hutchinson, Lieutenant-Colonel O'Brien, John A. Radford, H. Beaugrand, James L. Hughes, Attorney-General Longley, J. J. Kelso, G. E. Lumsden, Chancellor Rand, J. Jones Bell, Colon A. Scott, Reverend Henry Scadding, and others.

MEDICAL JURISPRUDENCE, FORENSIC MEDICINE, AND TOXICOLOGY. By R. A. Witthaus, M.D., of New York, and Tracy C. Becker, Esq., of Buffalo. Volume I. Cloth; 8vo; 845 pages. Price, $5.00; leather, $6.00. Sold by subscription only. William Wood & Co., New York.

The first volume treats of the legal relations of the physician and surgeon, including their acquirement of the right to practice medicine and surgery; their legal duties and obligations; their right to compensation; their privileges and duties when summoned as witnesses in courts of justice; and their liability for malpractice. There is also a synopsis of the laws of the several States and Territories of the United States, Great Britain, Ireland, and Canada, relating to the practice of medicine and surgery. Also is considered the legal status of the dead body; the powers and duties of medical examiners; the management of autopsies and the medico-legal reports thereon; personal identity, including the methods used for its determination in the dead and living; medico-legal determination of the time of death; the medico-legal consideration of wounds, punctured and incised; the medico-legal consideration of gunshot wounds; death by heat and cold, including isolation in its medico-legal aspects; the medico-legal relations of electricity; the medico-legal consideration of death by mechanical suffocation, including mechanical strangulation; the medico-legal relations of death by drowning; death from starvation in its medico-legal aspect.

As will be seen from the foregoing synopsis, the ground introduced into the first volume is very thoroughly and carefully covered.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 per year. The J. B. Lippincott Co., Philadelphia.

The complete novel for the April number is "The Flying Halcyon," by Colonel Richard H. Savage; Gilbert Parker's serial, "The Trespasser," reaches its twelfth chapter; other stories are "Cap'n Patti," by Elia W. Peattie, and "For Remembrance," by Elizabeth W. Bellamy. P. F. de Gournay gives an interesting account of "The F. M. C.'s of Louisiana," a class which lost distinctive existence by the war. Under "The Librarian among his Books," Julian Hawthorne describes the Library of Congress and its distinguished custodian. Chief-Justice Abraham Fornander deals with "Hawaiian Traditions," H. C. Walsh with "Coöperative House-keeping," and George J. Varney with "Storage-Battery Cars;" Junius Henri Browne contributes a study of Balzac. The poetry of the number is by M. S. Paden, Celia A. Hayward, and Charles C. Ziegler.

AUTO-INTOXICATION IN DISEASE. By Ch. Bouchard. Translated by Thomas Oliver, A.M., M D., F.R.C.P. Cloth; 8vo; pp. 302. Price, $1.75. The F. A. Davis Co., Philadelphia.

It is certainly an advantage to the American portion of the medical profession that Professor Bouchard's well known lectures on Auto-Intoxication in Disease should be rendered into the English tongue. The subject is one of every-day interest to the practitioner, and many of the facts alluded to can no longer be ignored. Putrefactive processes of the intestinal canal, and the development of physiological and pathological alkaloids, are now deemed to play an important part in many disease processes, formerly altogether unknown or misunderstood. This volume may be regarded as an inquiry into the alkaloids or poisons introduced from without or generated within the economy, and the parts they play in health and disease.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 a year. Charles Scribner's Sons, New York.

The principal contents of the March number are: "The Sea Island Hurricanes," by Joel Chandler Harris; "A Pound of Cure," Chapters I to XI, by William Henry Bishop; "The High Building and its Art," by Barr Ferree; "Life and Love," by Melville Upton; "The Farmer in the North," by Octave Thanet; "On Piratical Seas"—A Merchant's Voyages to the West Indies in 1805—by Peter A. Grotjan; "Subtropical Florida," by Charles Richards Dodge; "The Summer Intimacy," by George A. Hibbard; "The Cable Street-Railway," by Philip G. Hubert, Jr.; "John March, Southerner," Chapters XVI–XXII, by George W. Cable; "The Point of View:" What Lasts?—Self and Friend—The Author and His Book.

McCLURE'S MAGAZINE. Price, $1.50 per year. S. S. McClure, Limited, New York.

The March number offers information and sympathetic study of Ruskin, of his character and home-life by M. H. Spielmann. Rudyard Kipling, Robert Louis Stevenson, and Octave Thanet all contribute to the fiction. Andrew Lang, J. T. Trowbridge, and Renan are the subjects of portraits. Miss Ida M. Tarbell gives a comprehensive account of the French method of identifying criminals, as invented by M. Bertillon. Herbert Spencer contributes a most interesting essay upon the late Professor Tyndall. A. Conan Doyle contributes a paper on Arctic whaling, written from personal observation and experience.

THE OVERLAND MONTHLY. Price, 25 cents; $3.00 per year.

The contents of the March number are: "By Northern Rivers," by Ninetta Eames; "She and the Other Fellow," by Frank Norris; "A February Day in El Montecito," by Harriet Winthrop Waring; "The Requiem of the Dove," by Martha L. Hoffman; "One Way to Get a Rancho," by J. D. Mason; "Ethics of the Tariff Controversy," by Orrin Elliott; "After the Rain," by Silvia Lawson Covey; "Old California Placers and their Possibilities," by C. D. Robinson; "The Last that was First," by Julie M. Lippmann; "Ah Me!" by Francis Fuller Victor; Book Reviews, etc.

ATLANTIC MONTHLY. Price, 35 cents; $4.00 per year. Houghton, Mifflin & Co., Boston.

The March number appears with the third installment of Mrs. Deland's "Philip and His Wife." Charles Egbert Craddock continues "His Vanished Star." An excellent work of fiction is a pathetic tale of New England entitled "A Fore-Room Rug," by Kate D. Wiggin. Of uncommon interest to students of modern European politics is J. W. Jenks's account of "A Greek Prime Minister." Maurice Thompson writes of "The Sapphic Secret," which involves a study of peculiar charm of Sappho's diction. Sir Edward Strachey continues his talk of "A Country House."

THE PHYSICIAN, HIS RELATION TO THE LAW. By H. G. Blaine, A.M., M.D. Cloth; 8vo; pp. 46. Price, 50 cents. Blaine Brothers, Toledo, Ohio.

This is not a work on medical jurisprudence, but a sort of *multum in parvo* volume collated for ready reference. It is the cream and condensation of points of medical law most useful to the busy practitioner.

Therapeutic Brevities.

Cannabis Indica.—Experience warrants the statement that Cannabis Indica is often a safe and successful anodyne and hypnotic.—*Mattison.*

Dyspnœa of Phthisis.—Doctor Bernheim recommends:

℞ Caffeine citrate, 3 grains.
Sulphuric ether, 5 drachms.

Injected hypodermatically, thirty minims morning and evening.

Retention of Urine.—In cases of retention of urine in young children, it is often the case that an enema thrown into the rectum will so stimulate both the centre for defæcation and the genito-spinal centre for urination as to bring about micturition without catheterism—a proceeding always dangerous in young children unless anæsthetized.—*Medical Brief.*

Treatment of Writer's Cramp.—Benedict relieved a case of writer's cramp by injecting carbolic acid in the neighborhood of a sensitive point in the course of one of the flexor tendons of the related forearm. Langes succeeded in overcoming the cramp by having the pen held between the second and third fingers in such a way that the holder rests upon the latter at an angle of from 110° to 125°, while it is supported below by the thumb, the index finger resting lightly above. *Gaillard's Medical Journal.*

A Characteristic of Assafœtida.—A pronounced characteristic, one which is not generally known, is a sensation of emptiness and weakness, with distension and beating in the stomach and abdomen, accompanied by rolling and gurgling in the belly, from which gas is nearly always discharged per rectum with difficulty, but escapes easily through the mouth with numerous loud and forcible eructations which give relief. It resembles in this Argenti nitras. An obstinate constipation often accompanies this condition.—*Rivista Omiopatica.*

Treatment After Excision of Hæmorrhoids.—Mr. Robert Jones, of Liverpool, in the *Provincial Medical Journal*, recommends that in those cases of hæmorrhoids which are suited for treatment with the clamp and cautery, the latter instrument be dispensed with. The hæmorrhoid is placed within the clamp and cut off, leaving about an eighth-

inch of pedicle. This cut edge is sewed with a continuous catgut suture, the clamp removed, and the operation is complete. He does not use the cautery, except in the case of friable granular hæmorrhoids.

Curetting Trachea in Diphtheria.—Scudder (*Boston Medical and Surgical Journal*) reports a case in which dyspnœa became so marked that, after tracheotomy and all ordinary efforts to remove the false membrane failed, he resorted to a dull wire intra-uterine curette, which was carried down through the tracheotomy wound to the bifurcation of the trachea, and the whole circumference of the latter systematically and thoroughly curetted. As the curetting continued, pieces of membrane were withdrawn through the trachea. The hæmorrhage was slight; relief to the dyspnœa was immediate; and the patient recovered.

Cream of Tartar in Venereal Diseases.—Doctor E. Oteri, an Italian physician, has discovered that Cream of Tartar is apt to prove useful in the treatment of gonorrhœa and venereal sores, by reason of its absorbent and antiseptic properties. The following is employed for urethral injections in gonorrhœa:

℞ Cream of Tartar, ʒ iij.
Distilled water, ʒ iv.

The bottle to be well shaken before using.

According to Oteri, these injections are sufficient to relieve the inflammation and arrest the discharge. Soft chancres and suppurating buboes are said to heal up rapidly under the influence of Cream of Tartar, which presents the great advantage of being absolutely inodorous.—*Edinburgh Medical Journal.*

Earache.—Earache is often due to acute tympanic inflammation arising from a naso-pharyngeal condition which demands treatment. Cleansing and detergent sprays and post-pharyngeal painting with astringents can control this and relieve any referred pain from this location. The hot syringing will give any needed cleansing, allay the local pain, and, by reducing the inflammatory congestion, help on the resolution. Protection, local and general, with medicinal treatment of general symptoms, will generally give such prompt and real relief that the host of other remedies may remain as an unemployed reserve. The physician summoned to a case of earache can generally leave his morphine and cocaine at home if he will take his brow-mirror, a syringe, and an atomizer. —Doctor Alex. Randall, in *The American Journal of Medical Sciences.*

Constipation of Infants.—Slater suggests the use of well boiled green food, accompanied by the occasional administration of senna-tea or black-draught to the mother. Latham prefers small doses of tincture podophyllin in a mixture with syrup and anise-water night and morning, supplemented each morning, if necessary, with an enema of soap and water administered with a small rubber syringe which holds about two ounces. When the child is older, if the trouble continues, he knows of nothing better than Cascara Cordial, a pleasant preparation containing the active principles of Cascara sagrada; this is readily taken by children, and is strongly recommended. Mackay uses only a glycerin suppository each evening, after the child's bath. Children soon get to like and expect the suppository; a copious motion is the result.—*British Medical Journal.*

When to Operate for Squint.—E. Jackson (*International Medical Magazine*), considering the question of operations for strabismus, says: "No operation should be done so long as other methods of treatment offer any probable chance of relief. The slow development of coördinating power in some children, and the possibilities of change by future development, should prevent early operative interference; and as a rule, therefore, operation should not be undertaken before the age of five or six years, and at that age complete correction by operation should rarely be attempted. At puberty complete correction of the squint by operation should be undertaken where it has been incompletely corrected or is of low degree. In adult life the existing indications govern the operation. In cases of squint due to ametropia the latter should be corrected before operation is attempted."

Organic Extracts in Neurasthenia.—Doctor Albert Mathieu has recently published an interesting essay on the treatment of neurasthenia with organic liquids—a method which enjoys wide popularity in France. After citing the brilliant results claimed by various French physicians, he adverts to the discovery that simple salt solutions will yield the same benefit. Doctor Mathieu himself administered with almost wonderful success a solution of phosphate of sodium (20 parts), chlorate of potassium (4 parts), and neutral glycerin (20) in water (80). Nevertheless

he places no special value on this composition; the action, he admits, is purely suggestive. "It is true," says the Doctor, naïvely, "that I added a large dose of suggestion to the formula; and it would assuredly be well if the amount of the former could be increased, and that of the sodium phosphate reduced." He does not expect a prolonged popularity for these organic injections.

Nitrate of Aconitine in Facial Erysipelas.—Doctor Tison has used this remedy since 1888, and the results have been highly satisfactory. Pain and other symptoms are rapidly subdued. Although Nitrate of Aconitine is highly poisonous, if used as suggested the danger of untoward symptoms is very slight. The alkaloid is dissolved in a mixture of glycerin, alcohol, and distilled water, the mixture having the same specific gravity as water, and containing one milligramme in fifty minims. Only two to four milligrammes are required in one case. The method of procedure is as follows: According to the condition of the stomach, either an emetic or a purgative is administered, immediately after which Nitrate of Aconitine is given in a mixture containing one milligramme for the twenty-four hours' dosage. The affected part is painted with a saturated ethereal solution of camphor, which acts as an excellent sedative. When all signs of inflammation have subsided, the part is washed with a weak solution of carbolic acid.—*La Semaine Médicale.*

Therapeutics of Oxygen.—Doctor A. W. Catlin, of Brooklyn, in a paper before the Medical Society of the State of New York, stated that the therapeutic use of oxygen is of very recent date. The treatment of disease by natural means is proving more and more efficacious as experience increases. Oxygen is a distinct remedial agent—one that should not be left untried until the patient is *in extremis*. It is the surest and most satisfactory stimulant that we possess, and applicable to many conditions. In profound shock, from whatever cause, it has been found to exercise a reviving effect. It is taken up quickly by the blood, but its chief value is upon the nerve centres, upon which it exercises a quieting and soothing effect. In hæmorrhage from typhoid fever he has seen relief in many cases. It will produce sleep, favor assimilation, and shorten the period of convalescence of typhoid fever. No agent is so well tolerated or so useful in restoring the equipoise of the physical condition. In cases of childbirth, pneumonia, bronchitis and other exhausting diseases, the use of oxygen is indicated, and it should not be given late, but early.—*Scientific American.*

Tropa Cocaine.—This is the title of an alkaloid isolated from the small-leaved coca plant found in Java, by Doctor Geissel; it is a benzoyl-pseudo tropein. The hydrochloride is easily soluble in water, and a one-per-cent. solution in the eye of a rabbit or frog induces complete anæsthesia in a few seconds. Compared with cocaine it is found that weaker solutions produce anæsthesia; and if solutions of the two of equal strength are used, the Tropa-Cocaine causes anæsthesia much the more quickly, and its effect lasts longer. Mydriasis may be observed in some cases, but is not constant. In subcutaneous injection it causes local anæsthesia more rapidly than cocaine, and the effect lasts longer and spreads over greater surface. Otherwise there appears to be but very slight difference in physiological action between Tropa-Cocaine and cocaine, except that the former is the less poisonous of the two. Professor Schweigger finds that a three-per-cent. solution of Tropa-Cocaine causes about the same grade of anæsthesia as a like solution of cocaine, though not so lasting; its persistence, however, can be induced by fresh instillations of the drug.

Saw Palmetto.—The fluid extract of this valuable remedy is a nutrient tonic in advance of the compound hypophosphites, and has a special action upon the glands of the reproductive organs, as the mammæ, ovaries, prostate, testes, etc.; its action is that of a great vitalizer, tending to increase their activity, to promote their secreting faculty, and adds greatly to their size. It is specially indicated in all cases of wasting of the testes, such as follows varicocele or is induced by masturbation, or which is often present in sexual impotency. In gynæcological practice it is much used to promote the growth of the mammæ; also in uterine atrophy dependent upon ovarian blight its action is unexcelled. But it is upon the prostate gland that this remedy exercises its best effects. Out of every ten men, nine have enlarged prostate and one has atrophy of the same. Case after case of both morbid conditions could be cited in which, by means of this agent, the size of the prostate was equalized, the difficulty of micturition removed, stoppage, dribbling, lack of force, completely overcome, and improvement in sexual power steady and most gratifying. A perfect rejuvenation follows the use of the palmetto; the general nervous system becomes balanced and reinvigorated.—*Chicago Medical Times.*

Medical Progress.

THE CHEMICAL CONSTITUTION OF PATHOLOGICAL BLOOD.—The iron present in the ash of blood is the representative of the organic hæmoglobin. By determining the amount of iron in the ash, Biernacki shows that it is only in very severe cases of anæmia that the hæmoglobin becomes diminished. In slight cases in which Von Fleischl's colorimetric method indicates a reduction from the normal of 105 to 70 or thereabouts, the iron in the ash is practically normal. This difference in results by the colorimetric and chemical methods is explained by the influence which variation in the amount of proteids is found to exert on the intensity of the color—the color being increased by an increase in the proteids, and *vice versa*. The essential changes in anæmic blood consist in an increase of the watery and a diminution of the proteid constituents. The altered color-intensity of anæmic blood indicates, not a decrease of hæmoglobin, but a diminution of the other proteids. The sediment volume—*i.e.*, the volume of corpuscles after settling—from blood whose coagulation has been prevented by potassium oxalate, is always diminished in anæmia, even when the number of corpuscles therein is normal. There is, therefore, a diminution of the volume of each corpuscle. Chemical analysis of the sediment shows an increase in water, and practically no alteration in the amount of iron except in cases in which an extremely low proportion of hæmoglobin is indicated by the colorimetric method. It follows that even in anæmic cases with normal number of corpuscles the proportion per corpuscle is not diminished and may even, relatively to the size of the corpuscle, be increased. This relative increase takes place at the expense of the other constituents of the corpuscle—namely, proteid, potassium, and phosphorus. The two last are diminished in cases in which the iron is still normal. The name "oligoplasma" is given to that condition in which the sediment volume is increased—the plasma being relatively diminished. This is due to a swelling of the red cells with water, which are relatively poorer in iron and proteid, but richer in potassium.—*Wiener Medicinische Wochenschrift.*

EPILEPSIA TARDA.—After personally observing 904 cases of epilepsy, and arranging them in a table showing at what age the first epileptic convulsion occurred, Doctor Mendel finds that though after the fifteenth year the number of cases in which epilepsy showed itself for the first time progressively diminishes, still it is not until the fortieth year is reached that a decided and sudden drop takes place. He would, therefore, suggest that we fix the age of forty as the arbitrary age limit between cases of epilepsia tarda and ordinary cases, rather than adopt the age limit of thirty suggested by Kohler. In order that his statistics might be as correct as possible, he exerted the greatest care to eliminate all cases in which epileptoid convulsions were generated by such factors as cerebral tumors, brain syphilis, general paralysis of the insane, dementia senilis, intoxication from lead, alcohol, or absinth, and all cases of apoplexy and hystero-epilepsy; and after observing all these precautions he found that in fifty-three of the 904 cases the epilepsy had remained latent until after the fortieth year, and that of these fifty-three cases, thirty-eight, be it noted, were males and fifteen females.

Concerning the ætiology of latent epilepsy, he gives an unequivocal contradiction to the statements of Echeverria, Russell Reynolds, and Nothnagel to the effect that hereditary influence is an unimportant factor, and cites several most interesting cases proving that this influence may remain in abeyance even as long as six decades. He also denies the dictum of Seeligmuller, that if the epilepsy remain latent until the age of twenty, syphilis must be strongly suspected; and he further never observed the arthritis that Charcot and Delanef described in such cases. In addition to hereditary predisposition, shock, injuries, parturition after the age of forty, and the menopause, play important causative rôles. The fits in epilepsia tarda are generally less severe and less frequent than in ordinary cases; the whole course of the disease is also milder and not so rapidly progressive, while impairment of the intellectual sphere and mental aberration are comparatively slight.—*Deutsche Medicinische Wochenschrift.*

"ANAL FISSURE."—Paul Thiery, in *L'Union Médicale*, defines this as a small excoriation at the anal margin, often hidden at the base of a small pile, and usually at the posterior or lateral border. The characteristics are: Ulceration; persistent reflex contractions of the sphincter; pain of a very distinctive nature, most severe after defæcation, possibly persisting for several hours (while in nearly all the other affections of this part the pain is most severe during defæcation and ceases soon after the act); streaks of blood with the motions. In the most marked cases the patient suffers severely; eats little,

in order to avoid the necessity for defæcation, and becomes hysterical, hypochondriacal, and almost suicidal.

The affections most likely to be confounded with anal fissure are: "Nervous rectum," or "hysterical fissure;" inflamed hæmorrhoids (in this case the pain is of a smarting character during defæcation, gradually subsiding after the act); and coccygodynia. A nerve-ending, no doubt, is exposed and irritated, giving rise to spasm of the sphincter, just as a corneal ulcer gives rise to blepharospasm; but this is a comparison and not an explanation, for why should large syphilitic ulcerations be almost entirely painless?

Thiery considers division or excision of part of the sphincter entirely unnecessary. He uses simple dilatation with the index fingers, the dilatation being made in a transverse direction, so as to be limited by the fingers coming in contact with the ischial tuberosities. Dilatation in a direction at right-angles to this is not only unnecessary but harmful. No incontinence of fæces follows the operation.

Contribution to the Ætiology of Trigeminal Neuralgia.—In addition to obvious dental affections, such as caries, there are two pathological conditions which cause intense neuralgia, and which are frequently overlooked, since they may occur in teeth which appear to be perfectly healthy: one is hyperæmia of the dental pulp, the other the deposit of newly formed dentine or calcareous material in the parenchyma of the same. The former is generally brought about by putting the teeth to some unusual strain or by accidentally encountering some hard foreign substance in the food, and it is supposed that in such cases the delicate efferent vessel at the root of the tooth is injured and its channel blocked, while the stouter afferent vessel remains unimpaired, whereupon a hyperæmia of the pulp ensues comparable to that which occurs in an incarcerated hernia. The offender is discovered by passing a small electric light with a reflector behind the teeth, when it will be found that those with a healthy pulp appear of a rose-red color, while that with a destroyed or injured pulp is distinctly darker; further, the application of ice-cold water induces no pain, whereas on holding a heated steel instrument to the tooth the neuralgia is greatly increased. Calcareous deposits in the pulp are comparatively common, and generally occur in more than one tooth at once; they likewise occasion hyperæmia, small-celled infiltration and obstinate neuralgia, and the heated-instrument test is again useful in diagnosis. In both cases relief of the pain immediately follows extraction of the tooth; or boring, cauterization and filling may be resorted to.—*Berliner Klinische Wochenschrift.*

Cases of Movable Kidney.—Mr. Gilford strongly supports the opinion that is now gaining adherents, that movable kidney is much more common among women than has hitherto been supposed. He refers to a number of well marked instances of the disorder; in some cases movement of the organ has been so slight, or has given rise to so few symptoms, as to call for no treatment. Among twenty-five cases no less than six presented symptoms of intermittent hydronephrosis, one being a girl of eleven. In the case of a woman fifty-four years of age the hydronephrosis was so marked that she appeared to be in a late stage of pregnancy, and respiration was greatly impeded. He insists on the importance of well fitting abdominal belts in the mechanical treatment of this malady.

In operating on ordinary cases Mr. Gilford forms a new bed for the organ by removing the fat from the usual renal site in the loin, and then strips off the greater part of the capsule, fixing the kidney to the loin by means of two stout silk sutures passed deeply through its substance. These are then brought out between the lips of the incision and passed round a piece of glass rod placed across the wound. Primary union is obtained and sutures removed partly on the tenth and partly on the fourteenth day. No opiate is given, and the bowels are moved by an enema on the fourth day.—*Medical Chronicle.*

Retained Testis.—The *retained* testis in man and in the domesticated animals is of small size, and the seminal tubules, though smaller, are more distinct owing to the disproportionate amount of intertubular connective tissue:

The walls of the tubules are thick from the formation of fibrous tissue on the inner surface of the tunica propria; and the epithelium is scanty and columnar, and there are no traces of spermatogenesis:

The testes is cryptorchids, though they are incapable of producing spermatozoa, are yet capable of exerting that influence which the natural testes exert upon the development of the penis and the growth of the body:

The function of the testes which influences the growth of the body at puberty, is distinct from that of the production of spermatozoa, the latter necessitating a more specialized

development of the tubules of the gland than the former:

The testes do not acquire their full (spermatozoa-producing) function, except at the furthermost point of descent from their primary position.—JOSEPH GRIFFITHS M.A., M.D., in *Journal of Anatomy and Physiology.*

CASE OF HERMAPHRODITISM.—Doctor G. Bergonzoli narrates a case of feminine hermaphroditism. The individual, 32 years of age, was the third in the family that had shown the same genital abnormality. There was a beard on the face; the neck was short and thick; the thorax had a masculine appearance; the breasts were small and fatty; there were no hairs on the chest, but these existed on the arms; the pelvis was masculine, as was the arrangement of the pubic hair. There was a vulva with little-marked labia majora, and a small penis measuring six centimeters in length when in a state of flaccidity. The meatus urinarius opened below the penis in the median raphe, and was surrounded by the male vestibular band of Pozzi. The labia minora were small, and in the vagina was felt an atrophic cervix uteri. No uterine body was to be made out, nor glands in the groins. The individual menstruated regularly from the age of eighteen. The voice was masculine in its characters. The being was brought up as a woman, and there is reason for believing that pregnancy twice occurred, but ended in early abortion. Bergonzoli considers the case one of feminine pseudo-hermaphroditism (external), or gynandry.—*Bollettino Scientifico.*

THE EFFECTS OF KNOTS OF CORD ON FŒTAL CIRCULATION.—Doctor R. Lefour has made some interesting experiments on the influence which knots of the cord have on the fœtus. He believes the conclusion that they never bring about death cannot be accepted, though in the majority of cases, thanks to the energy of the heart, they have no noteworthy influence on fœtal vitality. It is more likely that a fatal result will be brought about if the influence of the knot is increased by that of compression exercised upon it. Death may be due either to simple mechanical obstruction in the funicular circulation or to a thrombosis following this vascular alteration.—*Archives Cliniques de Bordeaux.*

RHEUMATIC DACRYOADENITIS.—Lagrange reports in *Annales de la Policlinique* a case of this rare disease in a man, twenty-two years of age, who first complained of a swelling in the right upper eyelid, the skin being red and tender; also of neuralgic pain on the same side of the head. Shortly after the lower eyelid swelled up, so that he could not open the eye; vision was normal. Through the œdema of the lids a hard, almond-shaped swelling could be felt in the position of the lachrymal gland, that was quite distinct from the orbital border, could be felt all round, and was considered to be normal. There was no appearance of suppuration. The patient had recently been under treatment for articular rheumatism. Salicylate of soda was ordered, and by the end of a week the swelling had disappeared.

DIVISION OF THE CERVICAL SYMPATHETIC IN EPILEPSY.—Bogdanik shares the belief of Alexander, Baracz, and Laksch, that the effects of ligature of the vertebral artery depend on lesions of the sympathetic; he therefore resolved to divide this nerve without touching the vertebral artery. The operation was performed on a lad, aged sixteen, who had been a subject of epilepsy for two years. After exposing the middle or thyroid ganglion, which is close to the inferior thyroid artery, he cut it away with scissors. Before the operation the patient had fits every day, in spite of bromides, whereas he was free from attacks three weeks after the operation. Bogdanik does not rely too much on so limited an experience, but considers the operation is indicated only in cases of idiopathic epilepsy.—*Vratch.*

ARSENIOUS ACID IN THE ANIMAL ORGANISM.—In *Riforma Medica* Doctor Severi declares that Arsenious Acid administered hypodermatically to a dog in sufficient quantity to produce poisoning is eliminated for the most part unchanged in the urine. The elimination begins immediately after the injection, is greatest during the first few hours, and continues for three or four days at the most. In cases in which small doses are given daily, no traces of arsenites are discoverable in the urine.

GALLSTONES.—Operation is called for when gallstones cause frequent or long-continued trouble. Operation is also required for empyema of gall-bladder, and for hydrops if it causes much annoyance. If the cystic duct is closed, the gall-bladder inflamed or its contents much altered, a temporary biliary fistula should be made.—*Czerny.*

Publisher's Department.

I have pleasure in offering my testimony to the virtue of Cactina (in pillet form), in cases of inordinate cardiac action, and I consider it a valuable adjunct to the Materia Medica.

DANIEL WILSON GWYNNE, M.D., etc.
Member of Gen. Council, University of St. Andrews, Plymouth, Eng.

***

MISUNDERSTOOD.

"So poor Jim is dead? Peace to his ashes!"
"Do you think he has gone there?"—*Puck.*

***

For Chronic Alcoholism.—

℞ Tinct. capsici, 1 ounce.
Tinct. zingiberis, 1 ounce.
Tinct. valerianæ ammon., 2 ounces.
Celerina, 2 ounces.

M. Sig.: Teaspoonful in teacupful of hot tea three or four times daily.

—*St. Louis Clinique.*

***

For Headache and Indigestion Use Horsford's Acid Phosphate.—A prominent physician of Buffalo, N. Y., says of it: "I have severe headaches, and it relieves them. I am fond of the pleasures of the table, and as a consequence of my indulgence there I have to pay the penalty. It divides penalty with me. Indeed it is an indispensable article to me."

***

Faith is sometimes personified as a drenched female clinging to a sea-washed rock; but a better personification would be a bald-headed man buying a bottle of patent hair-restorer from a bald-headed barber.—*Peoria Medical Monthly.*

***

Chas. Day, M.D., 79 St. Mark's Square, London, says: "I have prescribed Iodia, with very satisfactory results. Its power of arresting discharges was very manifest in a case of leucorrhœa, and another of otorrhœa. In the latter case, the result of scarlet fever in early life, the discharge had existed for many years. The patient could distinctly feel the action of the Iodia on the part, and the discharge gradually dried up."

***

Doctor Charles Nedskov, Sorrento, Fla., says: "Papine alone and in combination has been quite satisfactory. A case just dismissed may serve as illustration. The patient, a married lady, I found suffering severely from ovarian congestion and neuralgia. After preliminary treatment I ordered Papine, teaspoonful doses, half-hourly administered. Pain relieved after third dose, and next day she felt, to use her own words, 'a thousand times better.' Combined with Bromidia, a very noted improvement was effected in a case of 'nervous prostration' and inveterate chronic insomnia."

***

Oh, they are wise
Who advertise
In winter, spring
And fall.
But wiser yet
Are they, you bet,
Who never let up
At all.

—*Chicago Tribune.*

***

Did you notice the elegant new advertisement of the Walker Pharmacal Co.? The immense success that this enterprising firm has met with in the manufacture of Phytoline has induced them to put upon the market a new preparation known as Pineoline, made from the imported ethereal extract of the Pine Needles, and indicated in the various forms of skin affections. It has been used by some of the most prominent dermatologists and general practitioners in this country with the very best of success. Clinical reports on the use of Pineoline and Phytoline promptly furnished on request.

***

In referring to Peacock's Chionia I may say it is very nearly, if not quite, a specific remedy for constipation. I have prescribed it in obstinate cases of confirmed constipation, and in each case the remedy has proved successful. One lady who had been afflicted for years with the most obstinate constipation, took one eight-ounce bottle at my suggestion; this occurred four months ago, and since that time she has been free from any symptoms of her former malady, and is to-day in the best of health and spirits.

H. PACE, M.D.,
Port Sarnia, Ont. U. S. Consulate.

***

A RICH DIET.

Visitor: Your complexion is horribly discolored, my poor fellow. Does n't eating glass injure your health?

Prof. Cronche: No, w'en I sticks ter lamp chimbleys; but yistiddy I made a fool o' myself an' et an old memorial-windy.—*Puck's Library.*

***

Antikamnia.—This is a combination of elements belonging to the coal-tar group,

and is an American product. It is a white crystalline powder, odorless, and has a slightly burning taste; soluble in hot water and in diluted alcohol, but not in cold water. It acts as antipyretic, analgesic, and anodyne. The importance attached to this drug, I think, is due to its anodyne and analgesic power, and the celerity with which it acts. As an antipyretic in fevers, it acts more slowly than antipyrin, but is not attended with as much depression of the cardiac system and cyanosis. Whenever a sedative and an analgesic together is indicated, this remedy meets the demand. In severe headaches it is the remedy *par excellence*.—C. A. JULIAN, M.D., Louisville Medical College, in *North Carolina Medical Journal*.

* * *

CHICAGO, ILL.

Yale Chemical Co., Chicago, Ill.

DEAR SIRS:—From principle I am opposed to giving a testimonial for any drug or preparation, but six months' experience with "Gurania" fully convinces me that it is much superior to any of the coal-tar products (which, by the way, are all either German patents or secret formulas) as an analgesic. Its promptness of action is really often surprising to both patient and physician. Its entire freedom from depressing action on the circulation makes it not only a safe remedy, but gives a satisfaction in prescribing, even in case of heart lesions, which one cannot feel when giving the coal-tar remedies.

I have used "Gurania" freely and in a variety of cases and have not yet been disappointed in its action.

Yours truly,
J. HOMER COULTER, M.D.

* * *

The Malted Milk Co., Racine, Wis., are offering to send any physician one of their new desk tools, a ruler, measure and paper-cutter combined. You will find one a very convenient and useful article to keep on your desk. Physicians who are unacquainted with Horlick's Malted Milk will find it a very satisfactory food for infants whose mothers cannot nurse them or while weaned, and for adults as well, especially in cases of typhoid fever, pneumonia, phthisis, and other wasting diseases, and for digestive ailments such as dyspepsia, gastritis, cancer of the stomach, etc. It is a very pleasant and highly concentrated food, containing all the nutritive elements in pure, rich cow's milk and the cereals, the milk preserved without the use of cane sugar or other harmful ingredients, and with the excess of casein partially predigested by Plant Pepsin, a new and natural vegetable ferment used only by the above firm. Write for samples and literature.

* * *

CURIOUS, ISN'T IT?

The man of fifty met and said to the man of twenty-two:
"Hello, old man; where have you been this while, and how are you?"
And the man of twenty-two replied, his face lit up with joy:
"Well! Well! Is it true that this is you, and how are you, my boy?"

—*New York Press*.

* * *

Therapeutic Uses of Water.—That water is of great therapeutic value is proven alone from the fact that a journal existed and flourished for seven years, devoted exclusively to this subject. The only trouble has been that the uses of water were not properly understood, and the laity were led to believe that if water was good when taken at one time of the day it must be equally as good at any and at all times. Therefore the advocates of the free use of water appeared to be in direct conflict with the teachings of physiologists who declared that the too free use of water at meal-time diluted the gastric juices, delayed digestion, and often induced dyspepsia. Then the fact that iced water is so generally recognized as harmful, especially when taken in such large quantities and during a meal, appeared to be another argument why water was not so valuable as some of its advocates insisted. But now that we understand the process of digestion, and now that the laity also have a general idea on these matters, it is probably true that the value of water, as a therapeutic agent, is rapidly becoming recognized.

But more than this: Nature has furnished us with certain water in which are some of the most valuable remedies used in medicine. That these natural combinations are far superior to those of an artificial character has been abundantly proven. All of this comes to our mind as we examine a very complete pamphlet just issued by Col. Thos. F. Goode in the interests of the Buffalo Lithia Water. This is the most complete pamphlet on mineral-waters we have ever seen, and it contains a great deal of matter of interest to all of our readers. A list of the various diseases which have been successfully treated by these waters is given, together with testimonials from a large number of prominent physicians who have proven the value of these waters in the diseases indicated. By addressing a postal to Col. Goode, at the Buffalo Lithia Springs, one of these pamphlets can be secured.—*Food*.

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Original Articles.

ON THE ÆTIOLOGY AND PROPHYLAXIS OF LEPROSY.*

BY DOCTOR JULIUS GOLDSCHMIDT.

My experience, extending over a number of years on the Island of Madeira, favors the theory of direct conveyance of leprosy from man to man, although I have been able to establish such transmission in but a single case, and despite the fact that I have never been able to inoculate the disease upon either man or animal. The Funchal Leprosy Hospital has for the past ten years afforded asylum to a dog that lives with the inmates, that has repeatedly licked off lepers' bandages, partly consuming them, and that yet exhibits no symptoms of the malady whatever. True, the dog is regarded by the Director as well as by the inmates as leprous, but specific modifications are to be found nowhere in the skin—simply ulcers produced by vermin and assuredly harboring none of the bacilli of leprosy. Conveyance of the infection through mosquitoes is not admissible, because, first, the blood of the leprous is, as I have repeatedly assured myself, free from bacilli, and because, further, mosquitoes have been known on the Island of Madeira for only a few decades, being absent from many localities where the greatest leprous infection prevails. With just as much reason we might regard house-flies, of which there are such enormous numbers, or another nuisance which infests the island—the flea—as propagators of leprosy. Finally, we must exclude vaccination, which has been alleged to be a means of transmitting the infection.† Of the last twelve cases received into the Madeira Leprosy Hospital, seven were unvaccinated. The lower classes of people evade vaccination, though it is legally compulsory, being actuated by ignorance or prejudice.

From the foregoing it may be inferred that infection is difficult of effectuation, with due reference to the accumulation of the bacilli within the cells, and their probable death as soon as they pass out therefrom. Herein, too, we have an explanation for the comparative rarity of leprosy. Even at the time of its greatest prevalence, during the Mediæval Ages, it was by no means so baneful as is tuberculosis at the present time.

Singular in character as are the ætiological factors which confront us, much more that is incomprehensible presents itself when we take into account the gradual disappearance of leprosy from Europe. Geographically, leprosy is to-day almost unknown in the vast tracts north of the fortieth parallel of latitude, being restricted to isolated provinces. The leprosy hospitals, formerly so numerous on the Continent and counted by the thousands, have dwindled to eight, the total number of inmates comprising but a few hundred. A retrogression in the dissemination of leprosy occurred concurrently with the Renaissance. With the revival of a higher culture, with its gradual invasion of the North from the South, a simultaneous retreat of the pestilence was observed. Italy‡ was the first to expel it, and the same was accomplished by the northern populations in the order of their entrance upon a higher civilization. Nevertheless, larger or smaller foci of infection continued in many regions characterized by the greatest disparity of climate and soil and among varying nation-

* Translated by Joseph Helfman.

† Of late it has been sought to revive the agitation in England against vaccination by attributing the distribution of leprosy to vaccination for smallpox, but the published cases do not afford bacteriological proof; transmission in this manner is the less credible, inasmuch as leprosy has not been observed as manifested at birth or as a disease prevailing during the first years of life; hence infection through vaccination must be rejected.

‡ Haeser, "Geschichte der Epidemischen Krankheiten," 2d ed., p. 91.

alities—thus, in Norway and Spain, Iceland and Northern Italy. The interior of the Continent gradually came to enjoy such an immunity that we may regard leprosy in Europe as an insular or littoral disease. The common characteristic of the invaded regions is their geographic isolation; they are either islands or tracts enclosed between sea and mountain, with a meagre and destitute population exposed to all the evils of insufficient and improper nourishment, intermarriage, and neglect of bodily and mental culture. I was surprised, during the course of a journey through Norway, to observe, especially on the northwest coast, the same conditions, absolutely incompatible with the health of the population, as prevail on the Island of Madeira, which is so different climatically from Scandinavia. In Madeira, at all events, the mild and uniform climate, the pure atmosphere free from dust, conduce to the amelioration of the wretched social conditions, whereas in Scandinavia the excessively long and severe winter, involving poorer nourishment and less fresh air, must naturally promote the dissemination of the pestilence. The percentage of leprous has hitherto been greater in Norway than on Madeira, and will be reduced only when the proper regulations executed during the last decades shall have asserted their full effect, whereas on the Portuguese island nothing is done by the authorities with a view to exterminating the disease.* Similar conditions are presented by the valleys of San Remo, by the leper-districts of Spain (especially Northern Spain), Portugal, and Greece. Russia's population, though living for centuries in a state of serfdom, amid vicious hygienic conditions, enjoys immunity, on the whole, excepting isolated portions of the Eastern sea provinces, the lower Volga region, and the Caucasus; in Siberia there seem to be none save sporadic cases. On the other hand, all these districts are characterized by the same poor facilities for communication and by the same exclusion from the benefits of a higher civilization; for not the cultivated Russians, but rather the lowest, menial classes—the Esthuanians, Tartars, and other natives—are chiefly visited by the malady. In all these cases I leave out of consideration the use of fish food as a conducing or ætiological factor, and dwell only on the fact of nutriment being insufficient in quantity and quality.

To the correspondence of the general conditions which favor the continuance of endemics, we must add another fact—that in comparison with the country, the cities preserve a great immunity in all infected districts. Of 224 cases received during the past sixty years in the Funchal Leprosy Hospital, but eighteen came from the city and only a single case from the central portion. The number of those, diseased yet living at home, is much smaller among the urban than the rural population. Here we observe a material difference in the behavior of tuberculosis and leprosy. Social misery—wretched apartments, deficient nourishment, lack of space—can alone render the country-dwellers more susceptible than the inhabitants of cities to the latter contagion.

Bearing constantly in mind the transmission of the disease from man to man, and, on the other hand, the foregoing conditions conducing to such transmission, we come much nearer to a satisfactory answer to the question: "How may we guard against and exterminate the pestilence, with greatest ease and security?"

That which the progress of civilization has accomplished throughout the greater part of Europe, can everywhere be achieved by appropriate regulations, and with greater certainty of results at the present time than before. To all humanity it is of the utmost importance that we demonstrate that we can master a localized disease not too powerfully virulent, and that what is possible on a small scale will in the future also be included within the domain of the possible with respect to the more distributed infections—such, for example, as tuberculosis.

If we pass to a contemplation of leprosy, as distributed over the entire surface of the earth, it will soon become the conviction that this pestilence is not to be combated in accordance with a uniform plan applied without modification to all countries and zones. In my judgment, if success is to be assured, the afflicted groups of population must be divided and treated in accordance with a definite prin-

*In Norway there were 2,113 lepers in 1856, 1,834 in 1874, and less than a thousand in 1890.

ciple derived from the natural course and disappearance of the disease. With this view, the nationalities or races may be divided as follows:

Those which, despite the repeated importation of lepers, have always repelled the disease:

Those which have been infected during historic times and have offered a favorable soil:

Those previously infected, but now free or almost free from leprosy:

Those always infected, and remaining so up to the present time.

To the first category belong the United States of North America, and Canada. Beyond the fortieth parallel of latitude, as in Europe, traces of leprosy are scarcely to be discovered; in those localities where its presence has been shown to be the result of introduction by numerous leprous Norwegians —in Minnesota, Wisconsin, and Dakota—it has not been perpetuated down to even the second generation of these immigrants. While all colored races exhibit a very pronounced disposition to contract skin diseases, the negroes and Indians of the Northern States of the Union have proved very "refractory;" in the Southern States, however, the colored population has been visited by a small but distinct endemic (Louisiana, Southern California, Texas). In the North, the great mortality of the redskins from syphilis, tuberculosis, and alcoholism, probably affords the reason for their almost complete immunity from leprosy. Australia has also preserved its almost complete indemnity, despite the presence of numerous coolies; here also the colored race forms the greatest contingent, and here, likewise, the continent successfully repels the disease, whereas the entire Island-Archipelago and even the large insular domain of New Zealand are very much afflicted.

Just as Madeira was infected by its first colonists more than 400 years ago, the same is true of a whole series of other islands and continental districts in ancient and modern times. The Portuguese island forms an exception only in so far as it was unpopulated when discovered, and only a few decades later was thickly sown with lepers in pretty much the manner prevailing in continental Portugal, whence the first lepers undoubtedly migrated. In all the other portions of the newly discovered continents and islands the contagion required more time to gain a footing, probably because the soil proved favorable only when the original sanitary conditions of the natives were disturbed. The Indians of Mexico and Peru, who rejoiced in an orderly civilization without wealth or poverty at the time of the Conquistadores, became afflicted with the disease after being plunged into a social misery more bitter than slavery. The free Indians of the American steppes were attacked after renouncing their natural conditions of life, especially in the subtropic and tropic zones. The Kanakees of New Caledonia, the Maoris of New Zealand, the Hottentots of the Cape, the natives of Madagascar, now for the first time in their history present their numerous lepers, for until this century leprosy has never progressed amongst them. Before the year 1830 leprosy was unknown on the Sandwich Islands, discovered by Cook in 1778; to-day the disease finds in the native population a capital soil for its dissemination, without becoming very formidable to the interspersed white residents. Only such native races as are permitted to enjoy a continuance of their natural modes of life, whatever their habitats, enjoy an almost complete immunity—*e. g.*, the Zulus of South Africa, the aborigines of Australia, and the dense masses of Central African population. Various tribes of Zulus, however, residing partly on the Ungeni River and partly nearer to the city of Pitermaritzburg, who were strangers to leprosy until the year 1850, are now largely infected. *Per contra*, in support of the theory that the disturbance of their wonted conditions of existence renders possible the dissemination of the disease among native races, we may cite the Indians of Brazil who, infected with leprosy, returned to the wilds of the Upper Amazon, and were there again discovered after many years, strong in numbers and free from the disease.

Europe belongs to the third category. In contradistinction to all other known chronic or acute infectious diseases, it is true of leprosy that the denser the population the smaller is the percentage of the leprous. The malady has long been banished from the large cities, though diseased subjects

often come thither for treatment, and though social destitution is often greater in the cities than in the country. To be sure, Europe also presents the spectacle of countries with diminishing population and augmenting destitution, which nevertheless have eliminated the disease. Ireland, despite its almost chronic famine, its impoverishment, the resulting evils, and, finally, the established importation of leprosy,* has for more than a century enjoyed almost complete immunity from this pestilence.

At all events, the Emerald Isle far surpasses in civilization some other European States. Moreover, it should not be forgotten that when leprosy disappeared from the island, its civilization, or at least the welfare or prosperity of the entire population, was far greater than at the present time. In other portions of Europe a number of small endemics have arisen anew during the course of this century. Thus in the year 1850, the Spanish village of Parcente in the Province of Alicante was infected.† The disease spread with tolerable rapidity, but not beyond the boundaries of the community, and at the beginning of this decade was yielding ground. In like manner a small focus for the malady arose about thirty years ago on the St. George arm of the mouth of the Danube—the village of Chedrille,‡ inhabited by about 500 persons. The wealthier Greek population was ravaged far less than the poor Russians. In our own time, new endemics of leprosy are being constantly "discovered." Whether or not the "maladie de Morvan" is leprosy, has not yet been determined. The cases recently reported from the Herzegovina district may have been introduced from Turkey, or may have long existed in the former place, diagnosis being recently made on the basis of more careful observation.

The best known endemic was the Norwegian, and equally familiar was its speedy disappearance. Norway and the Russian provinces on the Baltic Sea, where about 400 cases have been counted, are the only portions of Europe which can exhibit pronounced endemics. But while the disease will soon be unknown on the Scandinavian Peninsula, thanks to the adopted measures for prevention, it seems to be making headway rather than losing ground on the shores of the Baltic Sea.

Most of the large tracts of permanently infected territory lie outside the scope of statistical investigation. Thus, it seems that the widely disseminated leprosy of the Chinese remains almost wholly undetermined in extent, apart from a few details bearing on the conditions in some of the coast provinces. The extent and intensity of the disease in the Celestial Empire can alone be inferred from the meagre fact that the coolies who have borne the pestilence wheresoever they have gone, come from all the provinces of this enormous complex of countries. At all events, it will be absurd to even conjecture a diminution in the leprosy of China: the disease finds too mighty an ally in the stagnating civilization of this country and in the neglect of every hygienic measure. In contrast with China, leprosy in Japan has ever been less destructive, and indeed seems to have receded during more recent years. Frequently enough the pestilence may be encountered among the Malayans of Farther India and the Southern Archipelago. On the Phillippine Islands the disease is well known in the coast districts, but almost unknown in the interior where the natives live in their primitive condition and have always known how to defend themselves against the Spanish. In Java the disease has become stationary, claiming few victims among the white population; the latter, to be sure, are separated from the natives by an immense social chasm. Whether or not the Chinese immigration has provoked a recrudescence of the malady, I could not ascertain.

The most important, because the most widespread, is the endemic of Hindostan, as it has always prevailed, undergoing in its

*Thus, an Irish soldier, returned from India where he had contracted a severe form of the disease, infected his brother with whom he occupied the same bed. Further cases were not observed. (H. Benson, "Case of Elephantiasis Græcorum," *Dublin Journal of Medical Science*, 1877.) In a London poorhouse there has long been living a leper who has inflicted no harm upon his own destitute community. Years ago I saw a like case in the Work- and Poor-house of Hamburg.

†Zuriaga, "La Lepre de Parcent," *Annal. de Dermatol*, 2d series, vol. ix.

‡V. Vignard, "La Lepre a Kedrilles," *Gaz. de Med. de Paris*, No. 46, 1877.

general character no modification whatever. One leper is encountered among every thousand inhabitants of the Peninsula—and this statement probably falls short of the actual truth. India also exemplifies the observation* that in the country and in secluded districts, whether in the mountains or on the coast, the pestilence is wider-spread and more stubborn than elsewhere. Thus, the Bengalese districts, bordering on inhospitable Nepaul, harbor the greatest number of lepers—as many as forty-one per 10,000 inhabitants. The number of diseased is likewise very great in the half-independent empire of Nizam, where the ratio of lepers equals twelve per 10,000. In the independent or sovereign States, the efforts of the Indian Government are much less effective than in the territory which comes under its immediate jurisdiction. As elsewhere, so also in Hindostan, does the disease predominate among the lowest classes of society. The higher castes, particularly the Brahmins, are said to suffer from it in but rare instances. Among the destitute, primitive inhabitants of India and the races derived from them—the coolies and the Mahrattas—there is one leper to every 400 individuals; among the generally affluent and well nourished Parsees, about one to every 2,000.

This rapid journey round the earth teaches us that not climatic or telluric conditions are the causes of persistence or disappearance of leprous endemics, but rather, by far, social conditions—an advance or retrogression or stagnation in civilization. This experience gives ground for the hope that the contest with the pestilence will be crowned with ultimate success. It may, of course, be objected that leprosy has disappeared in the course of ages because it has lost its virulence. But this would not seem to be true; for all the descriptions of mediæval leprosy accord with the prevailing type; moreover, in vast expanses of territory, leprosy is as widely distributed as ever in the past.

This behavior of the disease furnishes us with the measures to which we must resort for its successful suppression.

For the immune countries—those enjoying a natural or acquired immunity, such as the United States of North America, Canada, Europe, and Australia—it is sufficient to subject existing cases to rigid scrutiny, confining them, in the event of destitution and insufficient care, within the appropriate hospitals (leprosy hospitals); likewise furnishing them the means for cleanly living and better (that is, more abundant) nourishment. There should also be no dearth of instruction for the sick and the members of their families. The intermarriage of the leprous should be forbidden, where possible. Under no circumstances should marriage be permitted to lepers whose internal organs are already invaded by the disease, for the farther the symptoms have progressed, the more certain the prospect that the children will be afflicted with the same infection. Less is to be feared from the marriage of a leper with a healthy woman, or *vice versa*, particularly if the necessary measures of cleanliness and caution are observed. No vaccine derived from the children of lepers should be used, even if they show no signs of the disease themselves; and the wife of a leper, whether herself diseased or not, should not nurse either her own or strangers' children. Further, provision must be made for the most accurate statistics; in Europe, for example, we do not know even approximately the number of lepers. In many states, Spain for example, the figures vary between scarcely 100 and 1,500; in Russia, between 300 and several thousand; in Madeira, between seventy and several hundred. Therefore, the proper persons—ministers, teachers, physicians—must be commissioned, within districts readily supervised, to visit the leprous and their families several times each year, satisfying themselves as to the proper execution of the hygienic regulations, and submitting an accurate report annually or semi-annually. If to these measures, which correspond approximately to the Norwegian *régime*, we add for the benefit of those countries which yet enjoy immigration a stern denial of entry to all diseased subjects, and surveillance of all suspected individuals, a sufficient system of prevention is thus afforded, and the complete disappearance of the endemic may be hoped for in the not far distant future. Australia

* The malady is very unevenly distributed over the wide domain of the Peninsula, the ratio fluctuating between 1.4 and 15.7 per 10,000. See T. R. Lewis and D. D. Cunningham, "Leprosy in India." Calcutta, 1877.

and the North American Union, as well as the South American republics, may well justify an inexorable exclusion of the Chinese from the privileges of immigration by pleading their demonstrated danger to the general welfare. The coolie will never accept modern civilization, but will cling to his traditional prejudices and anti-hygienic necessities. While the leprous Norwegian in America corrects all his habits of life, and cures, if not himself, at least his posterity, who become even more amenable to the rules of an enlightened hygiene, the coolie establishes a little China wherever he abides, and furnishes it with all his vices and diseases for all time to come. At all events, colored lepers—negroes or Indians—south of the fortieth parallel of latitude in the United States, should be collected in leprosy hospitals.

Of course, we must yet reckon with the possibility of even an acute revival of the pestilence. Hence in places where leprosy has made such an advance during the past few years that the number of cases exhibits a disproportionate growth, rigid exclusion, without direct or indirect communication with the outer world, must supersede mere supervision.

The same is true of the prophylactic measures adopted in countries offering a congenial soil to the imported disease. Inspection, however zealous, is not enough, for all the races belonging to this last category are of inferior civilization and resisting power, and would not prove sufficiently susceptible to discipline to render successful such a system. The most rigid exclusion can here alone avail. Despite the fact that on the Sandwich Islands all known cases are transferred to the Sanitarium Island of Molokai, new cases are constantly springing up on this group of islands. Naturally enough; for a disease characterized by so slow an inception, by such trivial initial symptoms, which may first, though not often, manifest themselves on concealed portions of the body, may remain unrecognized in contact with healthy individuals for years, and will, unchecked, readily disseminate its pestilential seed. In such cases, the measures of prevention must be expanded to their utmost limits. All the members of the family—yes, even all the local residents—must be annually examined by an expert, and their health determined. All cases must be confined, with or without family companionship, according to the choice of the sufferers. This choice once made, all further relations must be severed. Furthermore, the number of leprosy hospitals should be as large as possible, to prevent an excessive crowding of the leprous and to facilitate supervision, as also to guard against further dissemination of the malady. It goes without saying that such institutions are to enforce the most scrupulous cleanliness, proper disinfection, and abundant nourishment.

Less stringent regulations are required by those nationalities among which leprosy has been perpetuated to the present day at the same, or approximately the same, degree of virulence. These are the nations with stagnating culture. Were it possible to break in upon their inertia and to introduce a modern, civilized mode of life, the endemics would also disappear slowly, as in Europe long ago. Russia's civilizing exertions in the Caucasus and in Central Asia will prove valuable in this respect; Japan seems to be justified in asserting the reduction of its endemic, dating from the time when, if it did not alter the manners of its people, it at least introduced a new medical science and hygiene. Japan has had its measures against leprosy since the days of antiquity, but they all proceeded from the view that the disease was disseminated only by heredity. Hence, it is demanded by a law prevailing since time immemorial, and at the present time as well, that in closing the marriage compact with a person recognized to be healthy, supplementary proof must be adduced that no leprosy has existed in the family of the contracting party back to a given point in its history. The furnishing of this certificate is imperatively demanded of the husband.*

The contest with leprosy will encounter its greatest difficulties on the Hindostan Peninsula; yet the most energetic steps should there be taken, inasmuch as India, next to China, exports the greatest number of cases to countries enjoying immunity. In Hindostan, all lepers and their families, if not con-

*A. Wernich, "Notice on Lepra Anæsthetica in Japan," *Virchow's Archiv*, Bd. 67.

fined within leprosy hospitals, should yet be restricted to their villages and, above all, denied opportunity to participate with the great body of the people in the frequent pilgrimages and festivals. Now that domestic medicine is yielding more and more to European science, it is becoming easier to replace the prevailing superstitions with correct views, and to survey, attend, and properly nourish the sick, besides guarding their environment from infection. I have previously called attention to the fact that besides cleanliness, an abundant animal dietary, with a certain quantity of alcoholic beverage, affords the best protection against contracting the disease. Whether and how these measures can be executed among the Buddhistic Hindoos, must be decided by the Indian authorities.

In concluding these fragmentary suggestions, I appeal to the International Medical Congress, to be held this year, to ask of those who have made the disease and its habitats a study, some general project for the suppression of leprosy, and definite measures to be adopted by the governments of all the afflicted countries. The greatest benefit would, however, result if Great Britain, which harbors the greatest number of lepers in its various colonies, were to assume the initiative, and were to summon an International Congress for the Suppression of Leprosy. It would be an undertaking worthy of our age to carry the contest against widespread diseases to a successful end, and to show that this pestilence, which even now bears the germ of its own destruction, may be everywhere exterminated. But unanimous effort can alone insure success.

A MEDICAL RECLAMATION FROM THE DOMAIN OF SURGERY.

BY T. H. BUCKLER, M.D.

If there is any one thing that does and must forever belong exclusively to the department of practical medicine, it is the ready means physicians have at command of always being able to dissolve in the gall-bladder cholesteric gall-stones with as much certainty as if these same calculi were in a glass tumbler before them.

Many years ago a much-abridged paper was published in *Ray's Journal* recommending chloroform in doses of from five to sixty drops every four or six hours, as a sure means of dissolving in the gall-bladder calculi, however large or numerous they might be. In the *American Journal of the Medical Sciences* for July, 1867, I also advised the use of succinate of iron as a solvent of gall-stones and of cholesteric fat, whether in the coats of arteries or elsewhere.

This preparation of iron contains more nascent appropriable oxygen than any other known therapeutic agent, in its decomposition and recompositions can do no harm, and is of all the ferruginous articles one of the very best for malarious cachexia, or in any other conditions where the blood-globules diminish or need rehabilitation. Nitric acid contains, of course, a great deal more oxygen, which is, however, too easily taken up where it is not wanted; whereas the oxygen in succinate of iron is only appropriated when required, and if not needed is not appropriated at all. And for this reason, in all those cases of liver trouble where nitric and hydrochloric acid are usually prescribed, the succinate of iron will, it is believed, be found on trial far more efficacious.

I have used the article for thirty-five years, prepared as a hydrated succinate of the peroxide of iron, and constituted thus: $Fe_2H_2C_4H_4O_4+6HO$. Held in suspension in impalpable form, it is permanent when carefully manipulated. Considering the activity of oxygen, it is easy to see what this compound can do with cholesterin and cholesteric fat, containing only one-and-one-half per cent. of that omnivorous agent.

In the Transactions of the Kentucky State Medical Society for 1877, Doctor John A. Octerlony reports a number of cases of chole-lithiasis, which were treated with complete success by the use of succinate of iron alone. In these critical and urgent cases of gall-stone, where often no time can with safety be lost, I prefer the conjoint use of terchloride of formyl and the succinate of iron. In the last three cases treated successfully, I commenced the use of both chloroform and succinate of iron as soon as the existence of a gall-stone was beyond reasonable doubt established, giving the former in doses of ten drops every four hours, and of

the latter a teaspoonful half an hour after each meal.

In two instances the patients, one a man and the other a woman, were able to take a teaspoonful of chloroform every six hours without experiencing the slightest ill effect. These large doses dissolved the calculi within the space of a single week. One of these cases was that of a Mrs. C——, stewardess in the *Scotia*, of the Cunard line, and attended by Dr. Bryce, surgeon of the ship. Her case had been pronounced cancer by seven physicians while crossing as passengers to and from Europe. The writer, influenced by the previously expressed opinions, also believed the case to be cancer when he first saw it, at night; but a more critical examination the following morning disclosed the real state to be an enormously distended gall-bladder lapped up over the inferior margin of the liver, resting against the anterior face of its right lobe, and filled with gall-stones, which were readily felt through the attenuated walls of the abdomen. A marked prominence was apparent to the eye, and an icterous color of the entire surface, not noticed the previous evening, by candle-light, was in the day-time at once recognized. This was three days before landing at Jersey City. On reaching home Mrs. C—— was ordered twenty-four ounces of succinate of iron, a teaspoonful of which she was directed to take half an hour after each meal.—Re-crossing in the *Scotia*, eighteen months afterwards, I passed for several days without recognition a large, red-faced Irishwoman, with a figure like a butt. She at length said: "And sure, doctor, if yev forgot me, can't ye remember the pain about me heart, and the cancer of me lever?" The emaciated, attenuated, and unrecognizable creature of a year and a half ago now appeared a mass of roseate flesh, fat, and blood rotundity that would have done credit to the doctrine of rest advocated and practiced for the cure of disease by the distinguished Dr. Philip Syng Physic, of Philadelphia. She said that on arriving at New York she got Squibb's chloroform, and took a teaspoonful of it in syrup and water every six hours for six days, at the end of which time the tumor over the liver had entirely disappeared and could no longer be felt; and that she then commenced the iron, and took it until the twenty-four ounces were gone.

Cases of this sort are very rare. I have seen but one other of the kind, in the wife of a clergyman in this city, and on stating it to that marvel of purity, truth, and accurate knowledge, the late Professor Roby, he said that he had seen somewhere a case reported—as well as my memory serves me, a post-mortem observation — where the gall-bladder, distended with cholesterin, had been found overlapping the margin of the liver, on which it rested, but he had forgotten where the case was recorded. I have seen a number of cases of gall-stone, all of which, except one, were successfully treated with chloroform to dissolve the cholesterin existing in the gall-bladder at the time, and causing paroxysms of pain amounting to positive anguish, for the relief of which chloroform, the great anæsthetic, is also the best agent. After existing calculi had been dissolved, then, to overcome the cholesteric diathesis, and prevent the formation of other stones, the patients were all kept on teaspoonful doses, thrice daily, of the succinate of iron for a period of four or six months.

The exceptional case where these agents were not used was that of Mrs. P——, residing in Cecil County, Maryland, where she was attended by three physicians, all of whom declared in true *ex cathedrâ* style their opinion that the pain could not result from the passage of a gall-stone, since in the records of their combined experience there was no case in which so young a patient, aged about twenty years, had ever suffered from an affection of the sort. How much better it would be if we doctors, seeing how often we are mistaken, would always allow an ingredient of doubt to enter into the formation of our opinions! The three physicians were advised to put Mrs. P—— on chloroform and succinate of iron, but the triumvirate thought differently, and sent their patient to Philadelphia to consult a doctor there renowned in that day for his knowledge of the diseases of women. He sustained the opinion of the Cecil County physicians, and gave her husband "Bud on Diseases of the Liver" to read, as a proof that biliary calculi were found only in women advanced in years, and told him it was im-

possible that his wife, with her youth, health, and extreme beauty we may add, could suffer from an affection of the sort. All she required, he said, was mental diversion and amusement, and advised that she should go every night to the opera; which she did for five evenings in succession, and took after each performance a supper. The last supper was on Saturday. At 2 o'clock the following Sunday morning she was seized with pain in the region of the liver, with distressing nausea and vomiting, and, after an illness of eight hours, died. The same morning at 10, Mr. P——, curious to know the cause of death, asked for a post-mortem, which resulted in the discovery of a calculus firmly wedged into the trumpet-like mouth of the gall-bladder. A small stone, from its liability to become fastened in this way, is more dangerous than when it attains considerable size. The one removed from Mrs. P—— was sent to me in a letter. It was about the size and shape of a small Alpine strawberry.

During nine years' attendance in the wards of the Baltimore Almshouse, where there was an average of nearly a death a day, and where all the bodies were examined, I twice removed calculi as large as a hen's egg from the gall-bladders of patients who died of other affections, and who during life never made any complaint of trouble about their livers.

The large majority of patients cannot take by the stomach more than ten or fifteen drops of chloroform every four or six hours, in which cases it should be continued fifteen or twenty days. One patient could bear only four drops every six hours. In her case the solvent was continued for six weeks, during which period daily inhalations of chloroform were also used.

The science of general medicine properly administered, and taking into account the frailties of human nature, is as certain as divinity, more so than law; and of all the certainties of medicine there is nothing more absolutely sure than that chloroform will in every instance dissolve calculi in the gall-bladder. When taken into the stomach it passes with the blood of the portal circulation, out of which bile is made, directly to the acini of the liver, and is carried with the newly formed biliary fluid to the gall-bladder, where its solvent power is as effectual as when cholesterin is dropped into a glass containing terchloride of formyl. Sometimes cholesterin clogs the acini and lesser biliary ducts, producing jaundice, in which cases this otherwise obstinate trouble is promptly relieved by giving chloroform; and from the power terchloride of formyl has of dissolving cholesterin within the human body, it is evident that it is not, before performing this office, converted, as some suppose, into a hydrocarbon. It might be given in the form of chloral or nascent chloroform, which latter is set free as soon as chloral comes in contact with the alkalies of the blood, but I have never given it in this form, preferring rather to use Duncan and Flockhart's Edinburgh or Squibb's New York chloroform.

Ether and turpentine were recommended more than half a century ago as solvents of gall-stones, but their use as therapeutic agents for this purpose has disappointed me very much, and after fifty years' experience little or no evidence as to their efficacy is to be found. The cause of this it is difficult to explain, since out of the body cholesterin is hardly less soluble in ether than in chloroform. I believe it to be owing to the difference in the specific gravity of these two agents, ether being the more diffusible, and floating on water, while chloroform sinks in it.

It is hoped that nothing more may be heard of extracting calculi from the gall-bladder by use of a knife or otherwise. A drop of bile in the peritoneal cavity excites usually a fatal peritonitis; and unless adhesion exists, or is artificially produced between the peritoneum lining the gall-bladder and that covering the anterior abdominal walls, the operation of cutting for gall-stones must in every instance be fatal within a few days. Suppose adhesion exists; the alternative must then be a biliary fistula, and if, haply, this closed up, and ceased to discharge bile externally, what could then be done for a distended gall-bladder adhering to the walls of the abdomen, besides having lost its resiliency and power of contraction? What is to become of the pint or pint-and-a-half of bile secreted in a day, a large portion of which would find its way to this now disabled sac, having no support and great capabilities of distention? Nature might as easily

pump bile from the bottom of a well as from a reservoir placed in so dislocated and unfavorable a position. What is to become of the small, more numerous, and most dangerous calculi that have not emerged from behind the liver? Are they also to be dragged out and cut for?

We hear of these operations in Germany, in Paris, and in the United States. They are called heroic, the exact meaning of which word, thus applied, has never been clearly defined. Does it refer to the operator or operatee? Is it meant by implication to signify that the operator is a hero because he has performed a heroic act, or that the patient is heroic in submitting himself trustingly to a painful, dangerous, or fatal operation? If it has reference to the former, there must be a great many heroes in the world; if to the latter, very few. I do not like to be disappointing to those who are fond of heroic resorts and methods, but it is evident that this operation for gall-stone, by whatever name it may be called, was initiated without due reflection or inquiry into the knowledge on the subject. If anyone contemplates an operation for gall-stone, let him first try the more quiet and less obtrusive method of dissolving it as here described, and depend on it there will be no necessity for a resort to the knife. With the present knowledge of the subject, it is a blot on modern surgery that a degrading necessity should have arisen to discuss an operation which must always carry in its wake death, or at best hopeless disability. The operation for gall-stone is indefensible, and let us hope that we may hear nothing more of it.

Several mineral-waters, notably Carlsbad, having a reputation for the *cure* of gall-stones, are for this object utterly valueless. I saw and treated Mr. von H—— for cholesterin in his gall-bladder just after his return from a prolonged residence at, and use of the waters of, Carlsbad. Nothing less than a solvent can reach gall-stone, and these waters have no solvent properties of the kind required.

According to my observation, chole-lithiasis is found four times in women where it occurs once in the opposite sex, so that gynæcologists have a fair field for trial of the proposed solvents before resorting to an expedient so hopelessly perilous as the knife.

Baltimore, Md.

ON THE PHYSIOLOGY OF THE HEART IN RELATION TO ANÆSTHETICS.

BY JOHN W. PICKERING, D.SC.

Although many brilliant investigators have devoted much time and energy to the study of the physiological action of anæsthetics on the heart, there are many questions still undecided, and the controversy as to the part played by the heart in deaths resulting from the inhalation of anæsthetics shows but little sign of abatement.

Since I propose to treat the subject from an experimental standpoint, it is necessary to remark that it is unwise to deduce generalizations from a single series of animals. To illustrate this I will cite the recent experiments of Professor Halliburton, who, working with a toxic substance termed nucleo-albumen, has found that albino rabbits are far more resistant to the fatal effects of this substance than are darker animals of the same species.

This "individual idiosyncrasy" in response to the action of drugs, which may occur in any group of animals, has, it is not improbable, led to the discordant conclusions of different observers, who have limited their experiments to single groups of animals and have disregarded the results recorded by other experimenters and clinicians. The following are some of the possible modes of action of anæsthetics on the heart:

1. The anæsthetic acts on the cardiac muscle itself, and may directly paralyze its contractile power:

2. That the paralysis of the heart, when present, is due to the action of the anæsthetic on the intrinsic cardiac nervous mechanism:

3. That chloroform syncope is due to a reflex cardiac inhibition caused by irritation of the nerve endings of the vagi in the lungs:

4. That chloroform primarily paralyzes the respiratory centre in the medulla oblongata, and that the consequent asphyxial condition of the blood secondarily paralyzes the heart:

5. That cardiac dilatation, when present, is due to pulmonary obstruction, and that chloroform has no specific action on the heart.

This last view, advocated by Lawrie, * has been rendered improbable by the experiments

* *Medical Chronicle*, January, 1891.

of McWilliam * and others, who have shown that chloroform will produce dilatation of both sides of the heart.

It is obvious that many of the difficulties of the problem are due to the presence of the nervous system of the animal undergoing experimentation. Gaskell and Shore † have, by the establishment of a cross circulation between two animals, allowed the blood of an animal inhaling chloroform to circulate through the brain only, and not through the heart, of another animal, and have by this means studied the action of chloroform on the heart *via* the nervous system. Conversely, they have allowed the blood of an animal inhaling chloroform to circulate through the heart of a second animal without passing through its brain. They have concluded that chloroform has a powerful action on the heart itself. But even in these experiments the intrinsic cardiac nervous mechanism (viz., the nerve cells and nerve endings of the heart) remains intact, so that we have a possibility of the anæsthetic acting on the heart through chemical stimulation of the cardiac termination of the vagi.

I have attempted to eliminate this difficulty by experimenting on the hearts of embryos previous to the development of a functional nervous mechanism. The chick embryo between the twentieth and eightieth hour of incubation presents us with an accessible form of heart minus a nervous system. Although at this period of development the embryonic circulation is very active, there can be no complication due to a change of blood-pressure. Also the factor of asphyxia is eliminated, except when purposely introduced by placing the embryo in an atmosphere of carbonic acid.

But it will be asked, what evidence is there that the heart at so early a stage of its development is influenced by drugs in like manner to the adult heart? I have made a large number of experiments to test this question, the details of which are published in recent numbers of the Proceedings of the Royal Society and the *Journal of Physiology*.‡

From experiments made on a large number of animals, both vertebrate and invertebrate, it has been concluded that digitalin, caffeine, strophanthin, and veratrine act directly on the adult heart muscle. The typical action of each of these drugs is so well shown on the embryonic heart that it is possible to recognize their dilute solutions by their physiological action alone.

There is, therefore, evidence that in the embryonic heart we possess a convenient means of determining whether a given drug acts directly on the heart or through the agency of a nervous mechanism. We can easily experiment with chloroform, ether, or nitrous oxide, either pure or mixed with air, oxygen, or carbonic dioxide. We can also test the action of drugs on hearts that have been stopped by anæsthetics, and thus get some indication of that great desideratum, a drug which will antagonize the toxic action of anæsthetics on the heart.

I should here mention that all my experiments have been made on hearts *in situ*, and under conditions such that their rhythms were maintained for many hours unchanged when no stimuli, either chemical or physical, was applied to them. With chloroform and ether I have obtained widely divergent results.

Thus one-half a C c. of a chloroform solution, containing .00003 C c. of pure chloroform, will, if injected under the blastoderm of the embryo, rapidly reduce its cardiac rhythm and produce an exaggerated diastole. After the injection of .0004 C c. the heart stopped in an extremely dilated condition, but the auricle gave a few twitches in response to mechanical stimuli.

Ether, on the other hand, acts as a powerful stimulant to the embryonic heart. Thus a heart whose action had been stopped by exposure to cold was restored to its normal rhythm by the injection of .003 C c. of ether dissolved in one C c. of normal saline. It is only after comparatively enormous doses that ether can depress the cardiac rhythm of the chick embryo. These experiments show that chloroform and ether have an essentially different action on the embryonic heart—that chloroform has a depressor and ether an augmentor action—a conclusion at variance with

* *Journal of Physiology*, vol. xiii (1892), page 860.

† *British Medical Journal*, vol. i (1893), page 106 *et seq.*

‡ Proceedings of the Royal Society, vol. lii (1892), page 461, and *Journal of Physiology*, vol. xiv (1893), page 383.

the view of Claude Bernard,* reiterated by the Hyderabad Commission.

Nitrous oxide and air in a mixture of seventy per cent. of N_2O and thirty per cent. of O has but little depressant effect on the embryonic heart. Pure nitrous oxide after several minutes' action stops the embryonic heart in diastole. A mixture of seventy per cent. N_2O and thirty per cent. CO_2 rapidly stops the heart's action after thirty seconds' exposure.

A mixture of seventy per cent. of N_2O and thirty per cent. of O stimulates the heart. The heart's action is unimpaired after several hours' exposure to this mixture.

Hearts that have been stopped by the above-named mixture of N_2O and CO_2 can often be restored by the passage of a current of oxygen over them.

A mixture of carbonic acid and chloroform is far more toxic to the embryonic heart than a mixture of chloroform and air. I have failed with oxygen to restore hearts stopped by chloroform.

Raising the temperature of the embryo still in an atmosphere of chloroform or nitrous oxide will usually restore the stopped cardiac rhythm. This restoration is more difficult when there is a large percentage of CO_2 present.

I am therefore of opinion that CO_2 increases the toxic power of chloroform and nitrous oxide on the heart.

The conjoint action of the carbonic acid and chloroform during failing respiration, which has been emphasized by Doctor Brunton,† is worthy of consideration. It has also gained additional interest owing to the recent researches of Oliver and Garrett‡ on the tension of gases in the blood during anæsthesia. They have found that during chloroform narcosis there is a tendency for the amount of CO_2 to increase and the amount of O to diminish. A mixture of Brin's "oxygen," which contains seven per cent. of nitrogen, when given with chloroform delays the appearance of anæsthesia and may induce temporary apnœa. The increased oxidation of the tissues causes an excess of CO_2 to be present in the blood, which is, however, scarlet owing to the large amount of oxyhæmoglobin present. In cases where large doses of the anæsthetic stopped the respiration, the heart continued beating. Thus there is apparently with the administration of oxygen and chloroform less danger of cardiac stoppage than with chloroform alone. With nitrous oxide alone there was found a marked decrease of oxygen, but no excess of carbonic acid.

These observers wrote:

So far as N_2O anæsthesia was concerned, the danger probably depended on the great absence of oxygen, for the carbonic acid was present in small quantities compared with that in other anæsthetics, but was present in a very large quantity relatively to the amount of oxygen associated with it in the blood.

I therefore understand that Oliver and Garrett apprehend a source of danger in nitrous-oxide anæsthesia owing to the lack of oxygen in the blood.

Haldane and Lorrain-Smith* have, however, made experiments on human beings as to the effects of an excess of CO_2, with or without a deficiency of oxygen, on the respiration and pulse. They, like Hermans and Miescher, have observed that an excess of CO_2 will induce hypernœa more readily than will a deficiency of oxygen. Hypernœa begins when the CO_2 exceeds four per cent. of the atmosphere breathed. An atmosphere containing ten per cent. of CO_2 will produce extreme distress, followed by frontal headache and often by vomiting. If the percentage of CO_2 be raised to eighteen per cent., the respirations are rapidly stopped. Hypernœa does not set in until the percentage of oxygen has fallen to twelve per cent. of the atmosphere breathed, provided that the carbonic acid be removed. It therefore seems that the deficiency of oxygen in nitrous-oxide anæsthesia is not a source of danger, and it may be a question worthy of discussion whether the conjoint administration of oxygen in nitrous oxide anæsthesia may, by an increase of the amount of CO_2 in the blood, depress rather than aid the organism;

* Leçons sur les Anæsthetiques et sur l'Asphyxia (Paris, 1875), page 101.

† Hyderabad Chloroform Commission, Bombay, 1891.

‡ *British Medical Journal*, September 23d, 1893, page 684.

* *Journal of Pathology and Bacteriology*, vol. i (1893), page 169.

whether it is not better to ventilate the lungs with air which will tend to remove the CO_2 without stimulating the production of an excess of CO_2.

On the other hand it must not be forgotten that oxygen has a stimulant action on the heart (Klug,* Fano†).

We must now pass to the vexed question as to whether nitrous oxide forms a compound with any of the constituents of the blood, or whether its action is owing to the formation of reduced hæmoglobin and consequent deprivation of the tissues of oxygen. The deficiency of oxygen in N_2O anæsthesia seems to point to this at least playing some part in its action.

Doctor Dudley Buxton,‡ contrary to the opinion of Doctor MacMunn,§ has urged the probable formation of a compound of nitrous oxide with hæmoglobin or with some globulin of the plasma.

The recent researches of Christian Bohr,‖ who has shown that carbonic acid probably forms a compound with the hæmoglobin of the blood, and the researches of Doctor A. E. Wright,¶ which point to a rôle played by CO_2 in the chemical compounds formed by the blood plasma, lend much probability to Doctor Buxton's views, and emphasize the danger of conclusions drawn from negative spectroscopic results. The question must be, however, left *sub judice*. The importance of the existence of a compound of carbonic acid and hæmoglobin is obvious in its relation to anæsthesia, for we have to deal with a new compound in the blood and not with merely dissolved carbonic acid or carbonic acid combined in the plasma as sodium hydrogen carbonate.

This substance may account for an excess of CO_2 being more noxious than a deficiency of oxygen.

We have now to consider if it may be possible to pharmacologically antagonize the depressant action of anæsthetics on the heart.

Doctor Ringer* found that if a frog's heart has been stopped by chloroform, the application of a one-per-cent. solution of ammonium hydrate directly to the ventricle will restore the heart's beats to almost their original power.

I have tested this antagonism on the embryonic heart, and find that in hearts stopped in extreme dilatation by chloroform, the application of ammonia will partially restore their rhythm.

Doctor Wood,† of Philadelphia, has attempted to antagonize the action of chloroform on dogs' hearts. He failed to get any restoration of rhythm by the hypodermatic injection of either atropine, amyl nitrite, or caffeine, while alcohol only increased the cardiac depression. Ammonia had slightly beneficial effects, and digitalis, by raising the blood-pressure, often averted death.

Caffeine and atropine failed to restore the cardiac rhythm of the embryonic heart after a stoppage produced by chloroform.

I have also not obtained marked results with digitalin, but on this point, and on the action of strophanthin on chloroformed hearts, I hope to make further experiments.

Possibly Wood's results with digitalin may be explained by the vaso-constrictor action of that substance.

Strychnine, in doses of .00002 gramme, increases both the force and frequency of the embryonic heart rhythm. Larger doses are, however, very depressant. Strychnine is well known to have a stimulant action on the respiratory centre in the medulla oblongata. Hence it will promote the recovery of a failing respiration, which, if increased, will help to remove the anæsthetic and carbonic acid from the lungs of the person or animal. There is, therefore, a physiological rationale for the use of strychnine in chloroform syncope.

Some have suggested the use of an interrupted electric current to restore the heart stopped by chloroform. Chloroformed hearts will, if not too strongly poisoned, respond to electrical stimuli. We must, however, not

* *Archiv Anat. u. Physiol.*, 1879, page 435.

† *Archives Italiennes de Biologie*, tome xiii (1890), page 387.

‡ Transactions Odontological Society, 1886, page 90; 1887, page 133.

§ *Dublin Journal of Medical Science*, 1879, vol. lxxiii, page 210.

‖ Ludwig's "Festschrift," 1887, page 164.

¶ Proceedings Royal Irish Academy, 3d series, vol. ii, 1892, page 144.

* *Practitioner*, vol. xxvi (1881), page 436.

† Proceedings International Medical Congress, Berlin, 1890, page 133.

forget the observations of McWilliam,* who has shown that under certain conditions the effect of a local application of an interrupted current to the heart is the production of an arythmic fibrillar contraction of the heart muscle termed "delirium cordis," and not the production of the normal cardiac rhythm.

I have found that the direct application of heat will often restore a chloroformed heart when chemical and electrical stimuli fail. I shall, therefore, venture to ask if you have tried the application of external heat in the form of hot wet rags over the heart in cases of chloroform heart-failure. From the experimental standpoint, and from its great simplicity, it might not be unworthy of trial, at any rate, in conjunction with other means of restoration.

London, England.

HOW TO MAKE HOMES HEALTHY.

BY BENJAMIN J. PORTUGALOFF, M.D.

Whenever an epidemic disease gets hold, within a short space of time, of the whole of our globe, from Baku to Paris, from Aden to Peking, it is, in first instance, a proof that Mercury, Mars, Venus and Bacchus have done their utmost to infect the beautiful Earth. At times only Prometheus succeeds in clearing with his salutary fire the filth that has been heaped by man, and the plague then leaves the field. We do not know how many inhabitants there were on the face of the globe when the gods reigned on Olympus, but as regards the present century we know that in 1810 the entire population of the world numbered 682,000,000, and toward 1890 their number had increased two-and-a-half times, amounting to 1,562,000,000. Pretty crowded it gets, and there have somewhere accumulated piles of garbage and all kinds of dirt and filth.

A few centuries ago a huge desert was stretching where now is Russia: and now a smell as if of myriads of pinched bedbugs is spread all over Eastern Europe. Then again, the movement of population is not the same as before. When, after the discovery of America by Columbus, Magellan undertook his journey around the world, he completed it with incredible heroism and efforts in three and a half years. Now you start from Liverpool on a luxurious steamer and make the trip with the highest comfort in sixty-four days. Exactly with the same speed the whole globe can be run over by any epidemic, for the soil is everywhere prepared for the infection, fattened by garbage heaped for centuries and by the filthiness of all living mankind. Still it was not always so. At the dawn of history mankind thronged along the banks of the Nile, and Egypt was the first to work out some ideas of cleanliness and notions of hygiene, which were borrowed from them by other peoples. But Egypt was saved from accumulation of filth by the Nile. The inhabitants heaped mountains of refuse, but the river flooding the banks cleaned off the country. In another part of the old continent, in the city of Nineveh, whose very memory was centuries ago lost to history, the water-supply was very intelligently cared for; every chamber of the King's palace was connected by pipes with the central reservoir, and water was everywhere in abundance. The celebrated sewer and aqueducts constructed in Rome by Tarquinius remain till the present day, notwithstanding all the vicissitudes of twenty-five centuries' history, the greatest work of public sanitation bequeathed to us by the ancient world. Five centuries B. C., sanitary officers, ædiles, were elected to take charge of the cleaning of every town. The first triumvirs constructed aqueducts, baths, gymnasia, cared for the cleanliness of the streets and appointed medical officers. Their sanitary institutions are models even from a modern point of view. Toward the epoch of the last Cæsars, however, all sanitary institutions fell into a state of decay. The mediæval period, from Attila to Columbus, was an epoch of asceticism, as well as of accumulation of ordures.

Leprosy broke out first about the fourth century, and during the Crusades took enormous dimensions; hospitals for lepers were established during the twelfth century all over Europe. The people were overcome with superstitious fear, which kept them from approaching the unfortunate. Many places were overwhelmed by dirt, which necessitated a series of sanitary regulations.

* *Journal of Physiology*, vol. viii, 1887, page 296.

The British Islands were in special need of relief. In the thirteenth century stringent regulations regarding cleanliness were enacted, and measures taken to improve the condition of slaughter-houses and public and communal roads. So dirty was the Thames at the time that it became urgent to put a stop to that evil. After the close of the monasteries, hundreds of paupers and cripples were thrown on the streets, and severe laws were enacted against beggars. The filthy dens of the unfortunate poor became the hearth of the plague of 1665, which carried away over 150,000 human beings in London alone. But suddenly appeared Prometheus in full array—a terrible fire destroyed three-fourths of the city, and by this peculiar method of disinfection the capital was saved from the plague. Again all was forgotten. The practice of heaping ordures was resumed. Now a helping hand was lent by the salutary cholera. The people were awakened to the awful condition of their habitations, due to a great extent to their own carelessness. During the reign of William IV., a good deal of red tape was developed by the officers of the government; but Victoria's government is earnestly working on problems of public health and has shown itself quite liberal in its appropriations for public improvements, though much still remains to be done.

One who comes to consider modern Europe from the impartial standpoint of hygiene, feels alarmed over its gloomy future. In the beginning of the present century there was plenty of room in Europe, and life was more regular; now the population is increasing day by day, and the sanitary condition goes from bad to worse. The soil of all inhabited Europe is fouled. Pure water is utterly scarce. The rivers have become receptacles for all the ordures of the towns. No man of culture would risk to drink water from the Seine, from the Thames, from the Spree, or even from the Danube in Vienna. Of course no one would use drinking-water from the Moscow River—no more than from the Ganges, which, by a religious superstition, has been made a burial place for the Hindoo. The corpses rotting in the river contaminate its waters. Still, following Surgeon-General Moore's report, we learn that the sanitary condition of the towns and villages of India favorably compares with that of Turkey, Persia, or China. The condition of the latter may well be imagined. The marshes around the mouths of the Ganges and Brahmaputra are never dry—the soil is ever damp; the air is poisoned with the ill smell of the stagnant water. Right here is the birthplace of the cholera. When the season of rain comes, the cholera starts its route over the vales and plains of the country. It would not stop before the highest mountains, unless man is barred by them in his travels. It climbs as high as 3,000 feet between Shiraz and Ispahan, and even as high as 7,000 feet on the Himalayas. But here I wish to call attention to one remarkable fact: never has anyone met the cholera in the dry prairies of Asia, Africa, or America. Not a single instance is known of the cholera being brought to Syria or Egypt by the caravans crossing the vast prairies and deserts. In this fact we find a suggestion as to the most efficient weapons in our struggle against the epidemics. Damp and marshy grounds must be drained, and cleanliness must be maintained by all means. This is more essential than all the quarantines and other artificial measures, which result in nothing but an immense amount of bureaucratic red tape. In 1892 the attention of the whole world was arrested by the ravages of the cholera in Hamburg, where there is an excellent system of drainage by which all the ordures of a half-million population are promptly carried away into the mouths of the Elbe, near by the sea. There is a fair aqueduct, furnishing the whole city with drinking-water taken from the same river, quite a distance above the point where the refuse is let out.

Whence then did the cholera come? Everything is all right during the low ebb—all the refuse has been carried away into the sea—but with the high tide the sea returns to the city all that it has received, and right to the place where the aqueduct takes the water from. Thus the Hamburgers drink their own diluted excreta. We should wonder if there were no cholera there.

The same is the case with the Thames. Owing to the accumulation of ordures, to the dirtiness of the soil and rivers, all the parts of the world are well provided with their own infectious maladies and are all the time treat-

ing one another: Europe—with typhus, Asia—with cholera, Africa—with malaria, America—with yellow fever. But Europe is the hardest up, as its population is effeminated by civilization, while the filth remains the same as in the olden times.

The civilized life of the Europeans has become too complex for the primitive systems of drainage; it stands in need of sanitary improvements of a higher quality. Whoever has visited the large European centres, Paris, Vienna, Berlin, not to speak of the primitively dirty Moscow, and has taken the trouble to go farther than the fashionable parts, will testify to the dreadfully dirty condition of the so-called slums. Drainage alone is powerless here. Moreover, the drainage system is apt to carry away no more than ten per cent. of all the garbage; all slab, kitchen matter, street fæcal matters, etc.—in a word, twenty per cent. of the refuse—is carried out of the city by horses. Still this is far from being a thorough cleaning; the greater part of the refuse rots on the ground, infects the soil, or dries and spreads in the air as dust and is then breathed by the inhabitants of the city. Then comes the cholera to remind the modern man of the necessity of keeping his habitations clean. Cholera has thus become the most powerful agent of sanitary progress. But amidst the high achievements of European civilization cholera is a shame, a disgrace to man.

But the day is coming when man will shake off the disgraceful yoke of ordures and clean himself and everything surrounding him. England has set the example. The English have devised a very practical way to get rid of refuse and filth. In former days they used it as manure for their fields, but artificial chemical fertilizers subsequently proved more economical and fruitful; the demand for refuse ceased, and it became necessary to dispose of it somehow or other. Need brings forth genius, precisely as war makes heroes. Freier invented and constructed a stove of a peculiar style which destroys all refuse and garbage, that was for the first time put in operation in Birmingham in 1876. The example was followed by Leeds and Bedford. Last year forty English towns had such burners in operation. Now, how does it work? It can burn up all the garbage of a city, liquid as well as solid.

Freier's stove burns all house thresh, *e.g.*, paper, straw, wood, rags, and kitchen matter, and all kinds of street and market garbage. In some towns this stove burns confiscated meat and also excreta, if they contain no more than forty per cent. of water, and even garbage in which there is a considerable admixture of inorganic matter. This stove is Prometheus himself! The god of fire, benefactor of the human race, reigns over there. The construction of this stove, termed *cell*, is very simple. Sunday night a small quantity of coal is put in the stove, underneath the garbage. The fire lasts by itself until all the garbage is burnt. The stove is a metal one and is placed in a brick building, with high pipes carrying away the smoke and gases. The stove may be located in the most populated districts of the city, there being absolutely no danger of fire. Appliances are provided for keeping away smoke and harmful gases, and the tenants of the neighboring houses do not complain, do not know even, of the existence of the stove. The cost of its construction amounts to from $1,400 to $7,000, according to the size. It burns from twenty-four to thirty-five tons a week, and the expense amounts to twenty-four cents per ton. Very little service is required: one workman can attend to several stoves in the same building. Moreover the expense is made up by the income derived from it.—The ashes make a good manure.

At the same time the cell generates an enormous power acting as a motor in aqueducts, elevators, and electrical machines. In Southampton the burner provides with power 250 electrical machines. It is clear that the burner is the best guard of public health. It crushes all germs of infectious disease, and prevents the heaping of slab and the dirtying of the soil.

Why, then, not make use of this beneficent appliance? I might say, modifying the words of Henry IV., that the welfare of our race will be secured not only then when every peasant shall be provided with chicken, but when every hamlet shall have such a stove for the burning of refuse.

To conclude, let me say that an ideal state is that which strives to do away with epidemics; that their prevalence is a sign of a low state of culture and public health. When

cholera paid its first visit to England in 1831, it carried away 52,000 victims. In 1866 it struck only 18,000, while on the Continent it killed a full million. These results in England were due to the improved state of public sanitation. Our globe needs cleaning, and sanitation. In Prometheus, the incarnation of fire, we shall find the best and surest agent for this end. But we have not exhausted progress; we must go ahead and invent ever new and better and wider-reaching improvements. Civilization and her two bright daughters, Science and Hygiene, will guide us along the infallible ways leading to the achievement of these ends.

PETROLEUM IN A NEW ROLE.

Doctor Desprès, in inoperable carcinoma of the uterus, injects into the growth refined petroleum, and likewise applies the same on tampons in the vagina, sometimes using it as well in irrigations. He declares that injected into abscesses, petroleum stimulates to healing, removes the disagreeable odor, and consequently is especially valuable in disintegrating carcinomata and in gangrenous ulcerations; also claims to have employed with success in vaginitis, and that by means of three daily injections of four or five ounces, complete relief will be had in the course of a week.

Petroleum is supposed to possess the advantage of easy diffusion, deodorizing and disinfecting—yet not irritating—the mucous membrane; but if applied to an already inflamed membrane it causes vesicles to form.

If the half of these claims are true, certainly the coal-oil product deserves not alone attention, but careful investigation.

A NEW SWEET.

Last year was discovered a new crystalline body, sparingly soluble in water, that, as it is supposed to possess all the properties of saccharine, was naturally christened *Dulcin*. Special advantages are claimed for it as a substitute for sugar in those cases in which the latter cannot be given; it does not develop dislike as do levulose, saccharine, etc. It is said to have been employed for months without injury; also that its chemical constitution is very closely related to that of urea.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

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Editorial.

DEMISE OF BROWN-SEQUARD.

Charles Edouard Brown-Séquard, of the Paris Faculty, member extraordinary of the French Academy, and formerly a professor in the Harvard College of Medicine, died on Monday, April 2d. Few medical men are ever so widely or favorably known; fewer ever contribute so greatly to the advance of their profession, for he was as cosmopolitan in this direction as in his citizenship, having been born a British subject by a French mother and American father. To him the medical world is chiefly indebted for its present advanced knowledge of neuro-pathology and physiology. In his latter days, ignorance, slander, quackery and greed, at the hands of an irresponsible lay press and the pariahs of medicine, violently assailed him, misrepresenting in connection with the so-called "Elixir of Life" even his simplest utterances, yet failed in the slightest degree to dim the lustre that surrounded a long, noble, well-spent life.

THE HYPOPHOSPHITES.

Of late years the alkaline hypophosphites —hypophosphite of soda, of potash, of lime —have been growing in public favor. All three mentioned are closely allied in medical properties and uses, for which reason they are generally considered together and commonly offered in combination. They belong to the class of nervine tonics, or, to employ the words of Doctor J. F. Churchill, who first brought them prominently into notice, "they increase the nervous forces and are the most powerful hæmatogens, possessing all the therapeutic properties of phosphorus." Again, the hypophosphite of potash appears to act far more energetically as a liquifacient than either the hypophosphite of soda or lime; so

much so, in fact, that the late Doctor Thorowgood declared he had "known great mischief resulting from the incautious administration of this salt alone to persons afflicted with tubercular deposit in the lungs." He added, "as a gradual tonic and restorer of failing nerve force I prefer the hypophosphite of soda or of lime to the potash salt, and either of these will answer all the purposes of the pure phosphite as an internal remedy, though the three are more manageable and agreeable when employed in combination."

Mr. Taylor also, who carefully examined the properties of hypophosphites, suggests the soda salt is "better adapted for blood diseases than those of potash and lime, and the hypophosphite of ammonia for diseases of the secretory organs."

All the hypophosphites are very soluble in the animal fluids and are readily admitted into the circulation—more so, it is believed, than any other of the oxides of phosphorus. Their assimilation, moreover, is promoted by sugar, which has the additional recommendation of disguising a taste that to many persons is most objectionable. It is for this reason that hypophosphites are generally found in the market embodied in elixirs, frequently in combination with nux and iron —hæmatic hypophosphites, for instance.

Doctor Thorowgood especially recommends the addition of iron citrate to these salts in the treatment of anæmia, and also adds that such combination is sometimes most effective in the management of phthisis. In debility resulting from prolonged lactation, in some forms of dyspepsia, in anæmia and leucocythæmia, in catarrhal and leucorrhœal discharges, in myalgia and muscular pains, etc.

Mr. Taylor found the administration of hypophosphites attended with marked benefit, and prescribed with satisfactory results in all cases where there was reason to suppose phosphates to be morbidly deficient.

It must be remembered the demand for the phosphite of lime in the construction of the teeth contributes to the disturbing influence commonly described as the "fever of dentition," and in this, whether it occurs in the robust or in weakly, ill-fed children, these salts may be employed with marked promise.

THE MAKING OF SPECIALISTS.

Specialism in medicine has become recognized as in some degree a necessity. While there is now no excuse for a graduate being uncultivated and uneducated, yet, with all the means at command for the acquirement of knowledge, it is beyond the capability of the human mind for every individual to be equally proficient in all the departments of medicine and art—life is entirely too short for one to attempt to "plow equally deep" in each branch. It is to be deplored that specialists often engage in work without adequate preparation; even more so that medical students frequently select some special field of labor upon which they enter immediately following graduation—it is through such that both general and special medicine are frequently brought into disrepute,—for it must be evident to any mind that no school can graduate a specialist. The only material from which to make a successful practitioner of an individual branch is that of the skilled general practitioner; a thorough medical education, and then several years of general experience, should precede engagement in a specialty; moreover, the aptitude one may imagine he possesses for a particular field of labor may prove a delusion, and an entirely different branch ultimately be selected.

It cannot be denied that there has been apparent forgetfulness on the part of some that the human economy is possessed of other organs equally as important as that the individual has selected as worthy of his special attention. And while it may be a laudable ambition to perform many operations, and especially to secure a large percentage of recoveries, there should be an unswerving higher aim, viz., the relief and welfare of the patient—and it is well known, though perhaps not generally acknowledged, that recovery from an operation and relief from disease are far from being synonymous; the subsequent history of many operated upon often reveals a sad tale of aggravated suffering.

Take gynæcology, for instance: It is held by some that this is simply a branch of surgery and should never be separated from it—a claim the truth of which is very far from apparent. The general surgeon, though he

may be skilled in the technique of certain operations, is not always capable as a gynæcologist, for there is a preliminary training essential to entering upon this branch that the surgeon *per se* does not acquire; especially does gynæcology demand a delicacy of touch and a gentleness of manipulation which pertain more nearly to the domain of obstetrics than any other branch of the medical art.

The true specialist, whether gynæcologist, ophthalmologist, or other branch, is the outcome of careful, definite training—not born, as some seem to imagine; nor is the process of education to be fulfilled by any college curriculum. Take the accoucheur to whom the dearest interests of the community are entrusted: First and foremost he should be a cultured, educated gentleman worthy of the trust commended to his care; next, he should possess the thorough training that can only be attained by years of experience as a general practitioner—he should be both a physician and surgeon in the full acceptance of the terms, which means a general knowledge of all the branches of medicine; finally, he should receive special training at the hands of several masters rather than one, in order that the scope of his mind and education may be broadened. The improved methods of teaching, and the increased clinical opportunities, now afford privileges such as admit of no excuse for ignorance. Equally is this true of the gynæcologist; and no less important are the rôles of abdominal surgery, ophthalmology, otology, laryngology, *et al.* It is the duty of every man to aspire to perfection of character and to the attainment of absolute truth and certainty in art and science. It should be the unswerving aim of each individual in a profession to reach the ultimate of scientific knowledge and accuracy; then, and then only, is he fit to assume the teaching and practice of a specialty.

COMPARATIVE VALUE OF PEPSIN AND PAPOID, OR PAPAIN.

Papoid, papain, and papayotin are synonymous titles applied to a digestive ferment extracted from the unripe fruit of the paw-paw tree (*Carica papaya*). This product was introduced with a loud flourish of trumpets several years since, but met with little favor since it failed in any sense to justify the extravagant encomiums lavished thereon. Recently, under the first-named synonym, it has been revamped and rehabilitated, so to speak, and, like most proprietary preparations, has been able to secure an amount of affirmative evidence—the negative, of course, being carefully ignored and excluded—sufficient for advertising purposes. Success is perhaps the more easy because sufficient time has elapsed since its first introduction to permit its failures and fallacies to be forgotten, and which are further covered by a change of title from *papain* to *papoid.*

Latterly the extravagant claims made in its behalf by its promoters—claims by no means borne out by clinical and experimental evidence—have been a subject of discussion by the Pharmaceutical Society of Great Britain, and the eminent chemist D. B. Dott, F.I.C., F.R.S.E., was led to undertake an examination of its merits as compared with those of pepsin,* as follows:

1. One hundred grains albumen, freshly boiled and sifted, digested in one ounce water with ten minims dilute hydrochloric acid, at a temperature of 98°–100° F., with two grains pepsin. Solution was nearly complete in an hour. After four hours, one drachm nitric acid, diluted with three drachms water, was added, the precipitate collected, washed, pressed gently in blotting-paper, and weighed in the moist state = ten grains.

2. The same experiment in all respects, but that seven grains of papain were used. The nitric-acid precipitate (including undissolved albumen) = 103 grains.

3. One hundred grains egg albumen with one ounce water, fifteen minims dilute hydrochloric acid, digested at 130° F. with two grains pepsin. Solution was nearly complete in fifteen minutes. After two-and-a-half hours the practically clear solution was mixed with thirty minims nitric acid, diluted with two drachms water. The precipitate collected and weighed, as above noted = two-and-a-half grains.

4. The same experiment in all respects, except that two grains papain were used. After two-and-a-half hours the albumen was not nearly dissolved. It was collected and weighed in the moist state, = seventy grains. The filtrate from this precipitate was then mixed with nitric acid as above described; precipitate collected, etc., = thirty-three grains.

* *Pharmaceutical Journal and Transactions*, March 10th, 1894, page 758.

From these experiments it is evident that papain has only a slight solvent action on albumen at the temperature of the body, and practically no peptonizing action. On the other hand, pepsin has a high power, both of dissolving albumen and peptonizing the solutions. The higher temperature of 130° F. (as in the B. P. test for pepsin) increases the rapidity both of the solvent and peptonizing power of pepsin, and likewise increases the solvent power of papain.

Certain assumptions are made, viz.: that the pepsin and papain of two well known makers are what they are represented to be; that non-precipitation by nitric acid is a trustworthy indication of the formation of peptone.

The foregoing is not at all convincing regarding the superseding of pepsin by papoid, neither does it bear out the highly colored advertisements and utterances that assure the reader the ferment of *Carica papaya* is pretty nearly a panacea for all the ills of digestion and ailments of indiscretion, being equivalent to both pancreatin and pepsin, and undisturbed by the chemical accidents that destroy the two latter.

A NEW METHOD OF USING POLITZER'S APPARATUS.

Those who have had occasion to use the Politzer bag to inflate the middle ear are well aware how difficult it is to cause the patient to swallow at the proper moment.

The general custom is to ask the patient to sound certain vowels or to swallow a mouthful of water, because in uttering these sounds, and during the act of deglutition, the soft palate is applied to the posterior wall of the pharynx. The fact remains, however, that the naso-pharyngeal cavity is only partially excluded by these means, and then only for a most brief—frequently too brief—period.

As the Politzer method of clearing the Eustachian tube is frequently of material importance, it may not be amiss to call attention to a novel and more simple way of preventing the air insufflated into the nose from escaping through the pharynx instead of passing into the tympanic cavity, suggested by the *Medical Press and Circular* as follows:

As the clearing of the Eustachian tube is now very much in vogue, and moreover in many instances very essential to the treatment of certain diseases of the auditory apparatus, it may be well to mention a novel and more simple method of attaining the object in view as arrived at by Doctor Boydan, in the *Medical Times and Hospital Gazette.* This gentleman suggests that the patient be directed to take a deep inspiration and then slowly blow out the air through a small aperture between the closed lips.

The rationale of procedure is that, so long as the patient blows, the velum palati remains in contact with the posterior wall of the pharynx, and Politzerization can be performed without the slightest difficulty.

MUIRA PUAMA.

Some years since this drug was introduced as an aphrodisiac of wonderful occult power; and though reports from Brazil stated that it was more powerful than damiana, it was never employed to any great extent, and clinical reports in its favor were not forthcoming.

Recently, however, Muira Puama appears to have obtained a new lease of life, and to be considered of sufficient value to interest the medical profession of Europe. Several pharmaceutical societies abroad have discussed and reported favorably upon it, and we note also that at a recent meeting of the Paris Pharmaceutical Society, Rebourgon declared that physiological trials demonstrated the drug contained only slight toxic properties, and that it was a remedy "well indicated for treating nervous weakness," especially in cases of digestive asthenia, also that "it has a record of usefulness" in relieving painful menstruation and restoring virility and fecundity.*

FERRATIN.

This is a new compound which Schmiedeberg appears to have succeeded in separating from pig's liver by a simple process, and which contains about six per cent. of iron.

It is held to be of service for the purposes of nutrition and growth, and also in diseased

*[We understand Messrs. Parke, Davis & Co., Detroit, have a limited stock of fluid extract of Muira Puama, and that they will gladly supply physicians with moderate samples for purposes of scientific study and experiment.—ED.]

conditions, as it supplements the iron-containing bodies which are taken into the economy with the food, but often in insufficient quantities. Its author claims that it is easily assimilated, as evidenced by experiments made by him both on animals and in man. He adds, "the Ferratin disappears from the liver of the dog when the latter is fed on a diet poor in iron, and is bled at lengthy intervals;" that it is not excreted by the kidneys, and hence these organs cannot be injured by it; that as a therapeutic agent its indications are the same as those for other preparations of iron.

He suggests that it should be given in such doses as to secure the presence of an excess in the alimentary canal, since an overloading with iron is not to be feared. He concludes: "It is in the first place a foodstuff, and can be used as such by those apparently in health. As a therapeutic agent, its indications are the same as those for the other preparations of iron. The sodic salt can be added to milk, the dose in adults being fifteen to twenty-five grains per day." Strongly acid bodies should be avoided, since they decompose Ferratin.

MEDICAL QUALIFICATIONS IN GAUL.

A new medical law has just gone into effect in France which effectually estops all foreigners from practicing except under conditions which few will care to accept. The applicant from a foreign country must apply to one of the faculties recognized by the law, viz., at Paris, Montpellier, Nancy, Lyons, Bordeaux, Lille, or Toulouse, and submit to it his papers with whatsoever records of scientific work or other claims to professional recognition he may possess. He will then be informed in due time what examinations he must pass before he is pronounced qualified to engage in the practice of his profession.

Yet we in this country permit the worst French charlatans to practice almost unchallenged.

EDITORIAL NOTES.

Freckles and Warts.—

At the last meeting of the American Dermatological Association, Doctor Morrison, of Baltimore, recommended for the removal of freckles a solution of seven grains corrosive sublimate in six ounces distilled water, to which are added four and five drachms respectively of tincture of camphor and rose-water: Three or four thicknesses of linen, cut to cover the seat of freckles, are moistened with the foregoing solution and placed upon the face at night until they are dry: Whatever remains on the skin is left till morning and then washed off. Doctor Morrison declares that after a few nightly applications the face will be red, and the epidermis peels off in fine scales, when any soothing ointment may be employed.

For the removal of warts he prescribes five grains of corrosive sublimate and a drachm of salicylic acid in one ounce collodion—he often increases the amount of mercuric chloride to thirty grains, if the milder application does not answer. If applied every day, the upper crust being removed before each succeeding application, four days will usually soften the growth to such a degree that gentle traction removes the wart.

In this connection it might be added that Doctor Sympson, in the *Quarterly Medical Journal*, warmly recommends that any treatment of freckles and warts should be accompanied by the internal administration of small doses of arsenic. He declares that the desired result is thus more speedily brought forward.

Our own experience is that any mild solution of corrosive sublimate penciled daily and faithfully upon freckles will usually remove them; but we can see no object in substituting a solution of bichloride in collodion for glacial acetic acid, or the even more potent acid chromic, for removal of warts.

Is There a Typho-Malarial Fever?—

Doctor F. L. Sims, in the *Memphis Medical Monthly*, declares that every autumn there appears a fever in his locality called typho-malarial, which is not an acute infectious malady; that it is probably due to pathological changes, the result of long-continued exposure to malarial influences, or, theoretically, to one or more of the six or eight parasites found in the blood of patients suffering from malarial poison—typhoid is due to a specific poison. The incubation and dura-

tion are much less, and the temperature range less uniform and regular, than in typhoid. Again, diarrhœa is often wanting, a symptom rarely absent after the first week in the more specific disease. The tongue in typho-malaria never evidences the gravity that the typhoid tongue does, and there is never sordes on the teeth, gums, lips, and in the roof of the mouth, neither is there a typhoid eruption; bronchial and pulmonary symptoms are usually lacking, and nervous symptoms absolutely rare in comparison to their constancy and gravity in typhoid. The intestinal pathology exists in much smaller percentage, and there is no evidence of dissemination through dejecta. Finally, Doctor Sims insists that even if the so-called typho-malarial fever of the United States is really a typhoid, the abandonment of the name "*typho*" would, in the present status of our knowledge, be premature.

Pasteurism and Hydrophobia.—

In the Alabama *Medical and Surgical Age*, Doctor E. R. Smith declares that in nine-tenths of the cases of people bitten by dogs, the dogs are not rabid, and in the remaining tenth a large proportion suffer no ill effects if they have no treatment. In the former, he adds, "the Pasteur treatment gets the credit of the cure, also in the latter cases." "There is not a well authenticated case on record where a developed hydrophobia was ever cured by the Pasteur treatment; on the contrary, there are authenticated cases where persons have died from hydrophobia after submitting to the treatment. Again, a rival which divides the honors of the Pasteur treatment is the 'madstone.' In very nearly every settlement there is some old man who has in his possession one of these stones taken by one of his progenitors from the stomach of a deer, and whose sovereign virtues it is sacrilege to dispute; this is applied to the wound, and by special act of suction or absorption peculiar to itself the poison is drawn out. There are more believers in this specific, and more well known cures than from the Pasteur treatment."

Lappa Officinalis.—

This drug, which for a considerable period has enjoyed a somewhat enviable reputation among our Eclectic brethren, is now receiving general attention because of its supposed effect upon the genito-urinary apparatus. It is held to be a regulator of all menstrual irregularities, and a valuable adjunct in the treatment of chlorosis. In amenorrhœa it is claimed as a remedy second only, if not equal, to pure apiol. Indeed, "regardless of sex it appears to regulate the strength and functional operations of the entire sexual system." It is a general tonic, and may be utilized as an important constituent in alterative compounds. Moreover, it is an excellent synergist to *Salix nigra*.

Things to Remember.—

Acids taken before meals lessen the flow of gastric juice; long continued they impair digestion and increase the secretions of the alkaline glands; if mineral, they are astringent to the mucous membrane of the alimentary tract (nitric acid excepted, which by its cholagogue effect tends to relax the bowels). *Alkalies* increase the action of the acid glands, consequently given before meals increase the flow of gastric juice; as a rule they are mildly cathartic, and their long-continued use tends to replete the circulation and to irritate the kidneys.

Retention of Urine After Operation.—

After surgical operations, especially those upon the abdomen or lower extremities, there is apt to be temporary retention of urine, due, perhaps, to actual shock, to paralysis, or to urethral spasm. Medical literature, as a rule, takes little note of this fact, and yet relief is quite simple, hot applications being usually all that is necessary, especially if applied to the region of the kidneys. Often frequent minute doses of normal liquid gelsemium answer every purpose.

New Doctors.—

The fifth annual commencement of the Michigan College of Medicine was held at the Opera House, Detroit, Thursday afternoon, March 29th, followed in the evening by an Alumni banquet at the Wayne Hotel. The graduating class numbered twenty-seven.

Items and News.

Science and Quackery.—

There are a certain number of medical periodicals whose columns abound with reports of useless and impractical surgical operations and cases of rare maladies, which the majority of physicians do not see in a life-time's practice, treated by absurd measures which only the most exuberant imagination, unrestrained by the dictates of common sense, could have devised.

These publications and their contributors are usually regarded as ultra-scientific, and if a superabundance of difficult technical terms and a severe stretching of the reader's credulity afford a basis for this claim, they are certainly entitled to it. The truth is, however, that it is this leaven of absurdity in the profession which enables the shrewd quack to enter its ranks with some pretense of justification. It is easy when intelligent men of high standing are involved in a tangled web of fallacious reasoning, for the professional trickster to wrap around him, unseen, the cloak of hypocrisy and humbug.

Medicine is the most inexact of all the sciences, but her loyal disciples should let the search-light of a reasoning intelligence, rather than the uncertain beams of a luxuriant imagination, guide them through the haze which envelops its mysteries.—*Medical Brief.*

An Extraordinary Lens.—

When a spherical glass lens was found in one of the tombs of the Pharaohs, it was regarded as, perhaps, the most wonderful lens in existence, though later investigations threw doubt upon the belief that the object had ever been used for any optical purpose. Be this as it may, we think that the palm will be carried off by Professor Dewar's wonderful lens, exhibited in his lecture on Liquid Atmospheric Air. It was composed of liquid oxygen enclosed in a spherical vacuum vessel. Its temperature was 200° below zero, a point at which all chemical action, except that produced by light upon a photographic plate, ceases. Yet, cold as this lens was, it was able to concentrate the rays from an electric arc, permitting them to pass through easily and ignite a piece of black paper held in their focus.—*British Journal of Photography.*

Dangers of Cocaine Salves.—

The *Medinicische Neuigkeiten* states that a salve (or solution) of Cocaine, even of two per cent., if applied to the breasts of nursing women, will produce erection of the nipple and suppression of the milk.—The suppression is only temporary, however, and disappears after discontinuance of the drug, yet it seems advisable to warn against employing Cocaine in the treatment of fissures of the breast in nursing women.

The Best Styptic.—

This, according to Doctor David W. Cheever, Professor of Surgery at Harvard, is Ferric Alum. It coagulates the blood very quickly, forming with the clot a sort of sand, which is not very irritating to the tissues. Its advantages over persulphate or perchloride of iron are that it secures a smooth sort of tissue, while the two former agents form hard, brittle, angular masses.

Just So!—

The following is said to have been received by a prominent Mississippi physician from one of his patrons:

"Mi wife have lost her recumpens to me and she is Desires to her Diszerns for enother man pleas ter sen me sum powders to put in her coffy to habilify her desires to me.

"HENRY S."

Chloroform in Labor.—

If carefully administered in parturition, Chloroform is always safe, and no woman should be allowed to suffer the terrible throes of childbirth when they can be so easily relieved. The heart is not affected by chloroform in labor as it is in surgical cases. Ether is not available in the lying-in room for obvious reasons.

Organic Extracts vs. Glycerin.—

It is only fair to mention that at the Hospice d'Ivey, in the treatment of cases of hæmiplegia and locomotor ataxia, similar results have been obtained by the use of injections of neutral glycerin as others have got by using injections of organic extracts.—DOCTOR A. DUNCAN, in *Milwaukee Medical Journal.*

Ergot in Pneumonia.—

In selected cases of pneumonia, Ergot and aconite in the early stage will give benefit; at the same time, morphine has some limiting effect upon the trouble. Of course, in very weak subjects and after the acute stage has passed away these depressants are not to be considered.—*American Practitioner and News.*

Longevity.—

The total number of deaths in Chicago in 1893 amounted to 27,095, of which number

1,209 were between 70 and 80 years, 444 between 80 and 90, fifty-one between 90 and 100, one at 105, and one at 110. The "Windy City" after all cannot be so very undesirable for residence from a hygienic standpoint.

Remarkable Triplets.—

Eliza Worthington, a colored woman living near Chattanooga, Tenn., recently gave birth to triplets, two *black* and one *white*. Three reputable physicians, who attended the woman, and some scores of private citizens, vouch for the truth of the story. Another argument for superfœtation.

Prehistoric Trephining.—

Victor Horsley asserts trephining was done in the Stone Age, and he has presented representations of prehistoric skulls to prove that the owners underwent and survived this delicate operation 5000 years ago, when there was nothing better than bone drills and stone saws as instruments.

What Keeleyism Accomplishes.—

A Keeley "graduate," now under treatment for relapse, furnishes the following information concerning his native town: Of sixteen cases that went through "cure," three have since died suddenly, one committed suicide, eleven have relapsed, and one still holds out.

Origin of Scarlatina.—

A considerable number of our foreign brethren believe this malady originates in the tonsils. This would uphold the argument, advanced by some, that there is a close relationship between scarlet fever and diphtheria.

New Glucoside for Ophthalmologists.—

Æscorcin, derived from the horse-chestnut, has been found useful by Frohlich in diagnosing lesions of the cornea, the latter being stained pink in places where there is interruption of continuity of the epithelial covering.

Ether in Great Britain.—

Until very recently chloroform has been the almost exclusive anæsthetic employed in Great Britain. The great mortality from this drug, however, has latterly induced a change, and now Ether is *the* anæsthetic.

Iodoform and the Aged.—

The extensive use of iodoform in the treatment of old people is not advisable, and it is very liable to produce delirium.—*Exchange.*

New Oxide of Arsenic.—

Doctor Retgers believes, as the result of experiments, that there exists an oxide of arsenic of the composition As_2O.

New Antidote to Poison Ivy.—

Grindelia robusta has recently been highly lauded as a remedy for poisoning by *Rhus toxicodendron.*

Book Reviews.

A PRIMER OF PSYCHOLOGY AND MENTAL DISEASE. By C. B. Burr, M.D. Cloth; square 16mo; pp. 104. Price, $1.00. Geo. S. Davis, Detroit.

To few books, in this age of many volumes, is accorded the privilege of being pioneers in their own special field, yet we believe that no volume of just this scope and object has heretofore been obtainable. The author's long experience in the realm of mental disease, his frequent and valuable papers in this line, are of themselves sufficient guarantee of the value of this little work. The success of its mission is, however, doubly assured because it is born of the author's *personal needs* in teaching of something which should, in an elementary and at the same time fairly comprehensive way, present the essentials of psychology and an outline of mental disease. Too often the former is a *terra incognita* to the student (and practitioner as well), who struggles vainly in his ignorance to get an intelligent idea of insanity. The present too prevalent ignorance of mental disease among the profession will be inexcusable with such a valuable book at hand.

Part I presents simply, clearly, and forcibly just so much of the principles of psychology as is necessary to an intelligent idea of the development and action of the normal mind. The language is well chosen, what is often thought dry is made full of interest, and leads naturally to Part II, which treats of Mental Disease.

Doctor Burr's definition of *insanity* is particularly happy in its exceeding simplicity; and the same may be said of his excellent classification, which is, however, all that is really necessary for student, attendant, or general practitioner. After a brief discussion of the *causes* of insanity, each form with its salient features is concisely presented and discussed. There is no waste of words, and the author is particularly to be congratulated on his terse and happy style, which has enabled him to give us in thirty-four pages all that we ordinarily obtain from a careful reading of much more pretentious volumes.

In Part III, suggestions are given for the

"Management of Cases of Insanity," which cannot but be helpful alike to students and practitioners, while to those taking up the work of an asylum attendant such suggestions are invaluable. All having to do with insane patients will find here information of great value and assistance.

Altogether this little book is a happy combination of rare worth and interest, and is full of help for those who teach, for those who practice, and for those who would learn, whether as medical students or as attendants to the insane. With such a book obtainable for the modest price of *one dollar*, no physician, medical student, attendant, or nurse can afford to be without a copy. We sincerely congratulate Doctor Burr on the admirable manner in which he has filled the needs of a text-book, available both for the medical college and the training school, and which at the same time meets so well the needs of the busy practitioner.—C. W. H.

A MANUAL OF DISEASES OF THE NERVOUS SYSTEM. By W. R. Gowers, M.D., F.R.S. Vol. II. Cloth; 8vo; pp. 1070. Price, $4.50. P. Blakiston, Son & Co., Philadelphia.

As the first edition of this work is well known to the profession, it is only necessary to point out the additions and alterations which have been made in the present. Amongst the new matter is found, in the section on the relation of the cortex to the skull, a description of Horsley's Rolandometer. In the section on the cortical centres a diagram is given in which the centres found to exist in the bonnet monkey are transferred direct to the human brain.—It would have been better to have transferred the results which have been obtained by stimulating the cortex of an orang outang, and a photograph showing the results in this animal has been published by the same authors from whose work the centres of the bonnet monkey were taken.

The section on nuclear palsies has been rewritten, and besides other additions there is a paragraph on peripheral ophthalmoplegia. In the chapter on neuralgia the question of treatment of epileptiform neuralgia of the fifth nerve is discussed, and the operations of Horsley for dividing the nerve between the pons and Gasserian ganglion, and of Rose for the removal of this ganglion, are given. The pathology of exophthalmic goitre in the light of the effects produced by removal of the thyroid gland is discussed, but Doctor Gowers is inclined to look upon the disease as a neurosis, a disease of the nerve elements themselves the nature of which is beyond our range of scrutiny.

A fresh chapter is introduced on Diseases of the Nervous System After Influenza, and also Martin's recent researches on the toxic albumoses of diphtheria. Doctor Gowers remarks that it is probable more facts will have to be discovered about this "toxine," and that the differences in the structures which suffer suggest that the material varies.

In the chapter on hysteria is reproduced Richer's characteristic drawing of the different phases of hystero-epilepsy; as this form of the disease is so very rare as even to be disputed in many quarters, it may be held that the accounts are overdrawn, yet Doctor Gowers assures as any one who has seen the actual attacks at the Salpêtrière will know that they are absolutely correct.

The account of neurasthenia has been increased by several pages, and a section on treatment added. As a whole the work is the most complete and original text-book on nervous diseases that has yet appeared.

CANADIAN MAGAZINE. Price, 25 cents; $2.50 per annum. Ontario Publishing Co. (L'td), Toronto, Ontario.

It would be difficult to find amongst the monthly periodicals a magazine at all rivaling in interest this successful national review, the *Canadian Magazine*. While broadly cosmopolitan in subject matter, it is also national in name, and in attention paid to every part of the Dominion. The March number is especially interesting, and there is not an article embodied that is not well worth perusal; especially notable is the freedom from sensational features and the absence of worthless matters, consequently the contributions are all of high character. The opening paper, "A Physical Catastrophe in America," by Arthur Henry, is worthy of careful attention; it deals with possible geologic changes which might at any moment occur to the western portion of North America, modifying not only geography and topography, but embodying wonderful climatic transformations. "The Canadian Premier and United States President," by John A. Cooper, is of especial interest to residents on either side of the border; a more than ordinary production is "The Garden of British Columbia," by E. Molson Spragge; Bernard McEvoy gives a very interesting account of the manufacture of "Brummagem Jewelry;" "Mexico and its People" is practically a continuation of other illustrated articles that have been contributed to this journal by Doctor P. H. Bryce. Reverend Herbert H. Gowen writes of "George Vancouver and Hawaii;" Thomas E. Chapin, of "Lenten and Easter Observances;" J. A.

Radford, of "Canadian Art Schools, Artists, and Art;" John Ferguson, of "The Death Penalty;" Faith Fenton, of "The Winter Carnival at Quebec," illustrated. The fiction is embodied in "A Broken Chord," by H. H. Morrison, and "A Tale of Germany," by H. Cameron Nellis Wilson. "Gable Ends" and "Scientific Notes" occupy six pages.

An attractive journal as a whole, the publishers are manifestly sparing no pains to make the *Canadian Magazine* what it really is—a first-class publication; one, moreover, that is improving with every issue.

THE NEW PETERSON MAGAZINE. Price, 10 cents; $1.00 a year. New Peterson Publishing Co., Philadelphia.

The *February* number contains a sketch of the "Bermuda Islands," by H. C. Walsh; Pauline-Bradford Mackie writes of "Old Vienna;" Ella Higginson, of "My Vineyard which was Mine is Behind Me;" Mignon Villars, on "The One Event of Mouans-Sartoux;" John Moran, of "A Birthday Message;" Mary Gray Umsted gives an excellent sketch of "Edinboro Town;" Louise Chandler Moulton writes of "The Dawn;" Edgar Fawcett tells "The Story of a Statue," and Frances Courtney Baylor of "Keeler's Gus;" Rudolph von Merz writes of "Frohe Botschaft," Phebe D. Natt of "Miss Priscilla's Ancestors;" "Unlovely Wives of Famous Men," is by Helen E. Drew; "To What End?" by Verona Coe Holmes; "On the Crest of the Wave," by Reginald Dykers; "A Prodigal," by Ernest McGaffey; "Poleon" is an anonymous contribution; "A Strange Dwelling" is by Robert N. Keely, Jr.; "Too Late," by Florence Earle Coates. There are the usual Fireside sketches.

The *March* number contains a sketch of "The Azores," by William S. Walsh; William Brunton writes of "Nature's Parable," and Frederick Rosslyn "On the Wall of a Cabaret;" "And Yet" is by Louise Chandler Moulton; "Poor Miss Maria," by G. B. Burgin; Alice Howard Cady writes of "Girls' Professional School in Rome;" "A Fallow Field" is by Amy E. Blanchard; "Redintergratio Amoris," by Jeanne Gould Lincoln; "The Little Alsatian's Story," by Mary G. Umsted; "The Demon of Miss Ashworth," by Robert C. V. Meyers; "A Great Painter," by Andrè Michel; "Only Pierrot," by Mabel E. Wotton; "Plautus and Comedy of Errors," an excellent comparison of an ancient and a modern play, by John Patterson; "A Puppet Show," by Mignon Villars; "A Day in a Spanish House," by H. M. Palmer; Frank Lee Benedict writes interestingly of "Louise Chandler Moulton;" "By the Fireside" is very interesting, as are also "Among the New Books," and "Publishers' Corner."

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 a year. Charles Scribner's Sons, New York.

The April number appears with the second of Octave Thanet's sketches of "American Types;" of decidedly different class is the description of "Bowery and Bohemia," by H. C. Bunner; a group of clever artists is described by Arsène Alexandre in "French Caricature of To-day;" Gustav Kobbé, in "Life Under Water," gives the amusing and stirring adventures of a diver; another illustrated article is "A Winter Journey Up the Coast of Norway," by R. B. Anderson; an impressive short story by Thomas Nelson Page is entitled "The Burial of the Guns." There are also installments of George W. Cable's serial, "John March, Southerner," and "A Pound of Cure," by W. H. Bishop; William A. Coffin writes about "Painting." The poems are by Edith M. Thomas, J. West Roosevelt, Duncan Campbell Scott, and others.

ATLANTIC MONTHLY. Price, 35 cents; $4.00 a year. Houghton, Mifflin & Co., Boston.

Besides Mrs. Elizabeth Phelps Ward's story, "The Oath of Allegiance," the April number contains two contributions relating to the war, viz., "General Lee During the Campaign of the Seven Days," by E. G. Scott, and "War's Use of the Engines of Peace," by General J. L. Brent; Professor Tyrrell writes of "Early Latin Poetry," Mr. Richard Burton of "Nature in Old English Poetry," Olive Thorne Miller of "Secret of the Wild Rose Path," Mrs. Elizabeth Cavazza of "Jerry: a Personality," Miss Repplier on "Opinions," Mr. A. Lawrence Lowell on "The Referendum in Switzerland and America," W. R. Thayer on "Some Causes of the Italian Crisis;" Mrs. Catherwood contributes a story under the title "The Windigo;" and "Philip and His Wife," by Mrs. Deland, is continued.

MCCLURE'S MAGAZINE. Price, 15 cents; $1.50 per year. S. S. McClure, Limited, New York.

The April number gives the story of the life of Doctor Parkhurst and his remarkable war against the official protection of vice and crime in New York City; Robert Barr and Clark Russell contribute short stories; "Human Documents" embraces portraits of Professor Henry Drummond, Andrew Carnegie,

and Ellen Terry; in addition Ellen Terry's life off and on the stage is the subject of an intimate study, illustrated with portraits and views of her charming country home; Archdeacon Farrar writes an article on "Christianity, True and False;" of especial interest to medical men is "The Poisonous Snakes of India;" R. H. Sherard tells of his "Literary Career and Methods of Work." The illustrations are of a high order.

THE PHYSICIAN'S WIFE. By Ellen M. Firebaugh. Cloth; square 12mo; pp. 186. Price, $1.50. F. A. Davis Company, Philadelphia.

Mrs. Firebaugh last year read a paper with this title before the Æsculapian Society of the Wabash Valley, which afforded the listeners so much pleasure that it was voted to be published in pamphlet form. The demand outside of the Society, however, was so great the author has been impelled to elaborate into a volume.

It embodies many good things, many just and witty hits, and a general outline of not alone the daily routine of the physician's wife, but of the physician himself, and of the trials and tribulations that fall upon both. We cordially recommend it, especially to the wives and families of physicians.

THE DELINEATOR. Price, 15 cents; $1.00 per year. The Butterick Publishing Co. (Limited), New York.

The April number gives prominence to bicycling by describing "How to Ride and What to Wear;" a suggestive paper is "Fitting Out the Family for Spring and Summer;" new dishes are given under the head of "Dainty Cookery;" "How to Live Wisely" commends itself to all housekeepers; "Etiquette of the Dinner-Table" treats of the most refined observances at the festive board; "Around the Tea-Table" furnishes the usual instruction and entertainment, to which is further added a description of an Easter party and literary charades. There are the usual articles on tatting, knitting, crotcheting, etc.

PEOPLE'S ATLAS OF THE WORLD. Paper; 4to; pp. 124. Mast, Crowell & Kirkpatrick, Springfield, Ohio.

The title of this work is sufficiently indicative of its character. It is one of the Farm and Fireside Library, the subscription of which is $3.00 per year. It is quite complete in outline, though we regret to see some of the maps are not up to date. Nevertheless it is a practical, handy work.

Therapeutic Brevities.

Therapeutics of Viburnum Prunifolium.— As a uterine tonic, Black Haw has no equal; it is specific in preventing abortion, and if the waters have not broken it accomplishes the desired result. In habitual abortion it does not always succeed the first time, but by continuing its use it usually succeeds the second time.

In one case a lady had miscarried four times. The fourth time she used the Viburnum without results. The fifth time the agent was used and the catastrophe was averted at the fourth month. But during the next two months the patient did not feel well and decreased in size instead of increasing. At the expiration of that time pains came on, which were encouraged and the woman delivered of a small fœtus fully two months dead *in utero*.

In another case the fœtus died at from three to five months in each of three pregnancies, and the death was announced from two to four weeks later by the tendency to miscarriage. This could be checked by Viburnum, but the agent was withdrawn the third time for obvious reasons. The lady is now three months pregnant and is being fed with concentrated foods and the compound phosphates to preserve the life of the fœtus.

Viburnum is efficacious in dysmenorrhœa of whatever character. It is safe and reliable in after-pains, promoting involution. Goss gives Viburnum at the time of the painful period. Wood claims there is danger of increasing the uterine contraction by large doses, but this has never been observed, though its marked effect in checking uterine hæmorrhage frequently has been manifested. He gives the agent in smaller doses, and claims equally good results; he advises one-drop doses in singultus. Schatz, on the contrary, believes that large doses decrease uterine contractions.—*Chicago Medical Times.*

Male-Fern for Tapeworm. — The mistake commonly made in the employment of *Filix-mas* as a tæniafuge is the administration of too small a dose. I have learned to give on an average two drachms of the fluid extract oleo-resin, but in divided doses, with the utmost success. Children should receive less; robust adults may tolerate more. It should be borne in mind that Male-Fern is not an innocuous remedy, as toxic symptoms have been reported from its use.

No little importance is to be attached to the preparatory treatment. For twenty-four hours the patient is to live on a spare diet,

consisting chiefly of toast and milk. At night ten grains of calomel should be given, if an adult, five grains if a child, and on the following morning from half an ounce to an ounce of Rochelle or Epsom salt or castor oil.

Now, on an empty stomach thirty minims of the oleo-resin Male-Fern are given every fifteen minutes until a total of two drachms has been taken. It may be given in emulsion or in carefully sealed capsules. To avoid the nausea, vomiting, and depression, the patient had better remain in bed. If the bowels do not move freely in the course of four hours, another dose of from half an ounce to an ounce of salts or castor oil is given.

In most cases, if the treatment has thus been faithfully carried out, the head of the worm will be found in the evacuations. Should it not be found, there is nothing to be done but await the reappearance of segments, for the Male-Fern is only efficacious when there is sufficient length of worm to permit of its being swept out with the intestinal contents after the head has been freed.—Doctor A. A. Eshner, in *Philadelphia Polyclinic.*

Artificial Serum.—Peillon, in *Lyon Médicale*, recommends an artificial serum as follows: Sterilized water, 100.00 grammes; chloride of sodium, 5.00 grammes; phosphate of soda, 10.00 grammes; sulphate of soda, 2.50 grammes; carbolic acid, 0.50 gramme. Injections of this substance, varying in amount from five to ten cubic centimeters, were made in a girl aged eleven, and a man aged thirty, and had no bad effect locally or generally. The skin was first washed over an area of six to ten centimeters with soap, and afterwards with sublimate solution. The total amount of artificial serum injected was 120 grammes, the injections being given at intervals of three days. After the fifth injection there was marked improvement, and after a month of treatment the girl was able to return to school. The man suffered from no discoverable organic disease, but for two years had every three months attacks of hæmatemesis lasting two or three days; he was anæmic, had no appetite, and was so easily fatigued that he could do no work. After the tenth injection of artificial serum the patient gained two pounds in weight and was improved in every way.

Typhoid Fever.—Doctor Klietsch, in the *Münchener Medicinische Wochenschrift*, claims to have achieved considerable success in the treatment of typhoid fever with Iodine—out of eighty-one cases so treated, only two died. He employed eight to ten drops every two hours of the following:

℞ Potassium iodide, 90 to 120 grains.
Distilled water, } each 2½ drachms.
Peppermint water, }
Solution of iodine, 8 to 12 grains.

He remarks that in from four to six days after this treatment is begun the temperature sinks, and grave cases are transformed into mild ones. Defervescence occurs between the eighth and twelfth day. The condition of the bowels is very much better than under other forms of treatment. The theory advanced by Doctor Klietsch is that iodate of sodium is formed in the intestines, and that this is decomposed in Peyer's patches, giving off nascent Iodine, which is inimical to typhoid bacilli.

Treatment of Chorea.—Doctor John Abercrombie offers the following: Unless the attack is very mild, absolute rest of mind and body is essential. Lessons must be given up and the child kept at home lying down. Most severe attacks demand complete rest in a bed with padded sides. In very severe cases the child should be slung as in a hammock. Only in the slightest attacks should the patient feed herself. When mastication is difficult, minced meat, strong beef-tea, milk puddings, milk, and cocoa should form the chief articles of diet. Sleep is of great importance. If necessary, chloral and bromides may be administered. Iron and arsenic are the best drugs, though drug treatment is of less importance than general management. Rheumatic manifestations or heart complications should be treated on general principles. In chronic cases, douches to the spine, shampooing, massage, and gymnastics are of value.—*Medical Record.*

Creosote in Chronic Pyelo-Nephritis.—In this disease, consecutive to renal lithiasis, gonorrhœa, or other infections, Creosote administered internally for a long time, and in large doses, will yield favorable results. In four cases thus treated a distinct and lasting amelioration was obtained after a few months. The attacks of fever, together with the pain in region of the kidneys, disappeared; micturition became clearer and continued less; and the patients felt well, while their appetites increased together with weight. The remedy may be administered by the mouth, or by the rectum in injections or suppositories, in doses of three to five drops, three times a day.—Doctor Weber, in *La Semaine Médicale.*

Therapeutics of Tartar Emetic.—During the winter of 1858 and spring of 1859 pneumonia and catarrhal inflammation of the lungs prevailed extensively in the northern portion of Shelby County, Tennessee. I ventured the use of Tartar Emetic in small and repeated doses at the beginning of the attack, and kept it up as long as occasion required; then commenced with small and repeated doses of calomel, squill, and extract hyoscyamus, blistering if necessary, and finishing up with senega and quinine. My patients generally recovered.

In severe cases of *la grippe* I give Tartar Emetic in the beginning of the attack, and have reason to be pleased with its effect. For controlling inflammation of the lungs, phthisis excepted, I would not lay it down for any drug I know of.—Doctor Samuel Hammondtree, in *Memphis Medical Monthly.*

Treatment of Epistaxis.—Doctor Cozzolino says that bleeding always takes place from the right nostril except in those who are left-handed; that the seat of hæmorrhage is generally the anterior cartilaginous portion of the septum, the starting-point being a minute excoriation caused by the finger-nail. He recommends application of a solution of fifteen grains of Trichloracetic Acid, in an ounce or ounce-and-a-quarter of sterilized water, directly to the bleeding point by means of cotton wool on the end of a probe. To prevent smarting, a little cocaine or tropacocaine is added to the mixture. The reaction caused by the acid is short, the eschar soon separates, and the wound quickly heals. Cozzolino thinks perchloride of iron as a styptic should be replaced altogether by Trichloracetic Acid in a solution of 1 to 80 or 100, and adds, "besides stopping bleeding it has distinct antiseptic properties."

Therapeutic Action of Salix Nigra.—J. H——, aged twenty-nine years, strong and well built young man, a subject of youthful indiscretions, had performed masturbation from one to three times daily for a period of from twelve to fifteen years. Seminal emissions occurred from two to four times a week, irritation (titillation) at end of penis all the time. Mental faculties were so deranged that it was feared he would become insane. If in the society of females, either young or aged, it was almost impossible for him to restrain his desires. I put him upon *Salix nigra*, one drachm three times daily. Prescribed no external application except cold-water sponging. After taking eight ounces of Black Willow the patient was free from both irritation and emissions—in fact cured. —Doctor J. W. Taylor, in *California Medical Journal.*

Fluid Extract Cascara Aromatic.—I have had very great satisfaction from an extensive trial of Fluid Extract Cascara Aromatic in the constipation of pregnancy. I find it of great value in toning up the internal muscular system, and its action on this class of patients is as a stimulant, laxative, and tonic. Its advantages in those states in which the stronger purgatives are so frequently and injudiciously employed, is highly pleasing. Moreover, the most delicate stomach assimilates it; children take it without the least hesitation; absence of unpleasant taste renders it, in my estimation, the best preparation of its class. Two or three weeks are sufficient to completely relieve any case of constipation, providing the patient keeps up regular habits.—E. W. Smith, M.D., Terra Haute, Indiana.

Therapeutic Value of Grindelia Robusta.—M. Jasicwicz has for some time employed this drug in affections of the respiratory tract, and finds that it exercises a remarkable action in dyspnœa. He is not prepared to say that it has any utility in bronchitis, but asserts it possesses real value in disorders of nervous origin, as asthma and the croupy cough of laryngismus stridulus—in a word, it is valuable in all the spasmodic phenomena of respiration, its action being comparable to that of belladonna, with the notable exception that it never develops toxic effects. It is further observed that the action of *Grindelia robusta* is more rapid than that of belladonna.

Normal Liquid Ergot.—This seems to be the best preparation of Ergot that has yet been introduced to the notice of the profession. We have given it an extended trial, and have been well satisfied with the results. It is reliable, uniform, and speedy in its action. In a recent case of obstinate menorrhagia it compared most favorably with the Ext. Ergot Liquidum of the Pharmacopœia, and we have therefore great confidence in recommending it to the notice of our readers. —*Medical Times and Hospital Gazette.*

Iron Contra-indicated in Gout.—Doctor Reliquet declares that Iron should not be employed in the treatment of gout. The

gouty frequently suffer from uric gravel, which may or may not be accompanied by nephritic colic, and in such cases Iron would favor the occurrence of the renal complications. Also, Maximin Legrand asserts Iron is harmful to the gouty. Doctor Reliquet is opposed to the entire suppression of alcohol in the treatment of this malady.—*La France Médicale.*

Exophthalmic Goitre.—Doctor C. Sargent, of Taos, N.M., declares he has had excellent results in the treatment of exophthalmic goitre, with enlargement of thyroid the size of a hen's egg, with *Thuja occidentalis.* In a brief period of time the result was marked by "no more eye trouble, no palpitation of the heart, and enlargement of the thyroid all gone."

Cocaine in Eye Troubles.—Doctor A. G. Hobbs calls attention to the fact that Cocaine should never be employed as a collyrium when an abrasion of the cornea exists. It is also contra-indicated in any corneal inflammation, and should not be employed beyond the acute stage of any form of conjunctivitis.—*Medical Chronicle.*

Hydrosis.—Olszewski, in *Centrabl. f. d. Ges. Ther.*, recommends fluid extract *Hydrastis Canadensis.* In mild cases a single dose of from twenty to thirty drops at night suffices; in more aggravated, from twenty-five to forty drops three times a day for several successive days will be required.—*Medical News.*

An Efficient Depilatory.—Butte, in the *Monatshefte für Prakt. Dermatologie*, recommends Iodine Collodium applied for three or four days in a fairly thick layer; when the collodium pellicle is removed, the hair will be found sticking to its lower surface.

Therapeutics of Calcium Sulphide.—Doctor W. C. Abbott asserts a successful experience in the case of boils, skin eruptions, sores on the feet, all of which were cleared up by a faithful use of this drug.—*Glasgow Medical Journal.*

Normal Liquid Cannabis Indica.—To relieve the cough of phthisis, Normal Liquid Cannabis Indica possesses a great advantage over opium in that it is not so great a depressant to the general nervous system.

Medical Progress.

THERAPEUTIC PROPERTIES OF FERRATIN.—Prompted by Professor Eichorst, experiments have been made during the past six months at the Zurich Medical Clinic for the purpose of determining the therapeutic value of the new iron preparation introduced by Schmiedeberg, of Strassburg.

The superior merits of the preparation are claimed to consist in its furnishing iron to the organs in the form in which it commonly occurs in articles of food, but in much greater quantity. Ferratin contains an average of six per cent. iron, and is moreover a nutrient preparation devoid of corrosive or caustic effect even when administered in considerable quantites.

The investigations were exclusively practical and designed only to determine therapeutic efficacy. A standard was established by several cases in which Blaud's pills were employed for the treatment of chlorosis.

In all the cases the proportion of hæmoglobin in the blood was determined by Gower's method, at the beginning and termination of treatment, and in most instances the number of red blood-corpuscles was calculated with the aid of a Thoma-Zeiss counting apparatus.

In a series of anæmias induced by acute disease, Ferratin was only administered after the termination of the latter, chlorotic and anæmic symptoms immediately following being regarded as an indication therefor; in fact, it seemed to afford a useful auxiliary in such cases, for the increase in the blood's content of hæmoglobin to more than five per cent. in eight days is a very considerable one; the multiplication of red blood-corpuscles is also considerable—the same augmentation was observed in cases of chlorosis and anæmia which were not dependent upon other disease.

The feature prominent in all cases was a distinct improvement in general health, and in most instances a material gain in weight.

In order to follow more accurately the effects of Ferratin, the blood of a number of patients was examined every five days; thus it was found that the increase of hæmoglobin in the blood, and of the number of red corpuscles, was conditioned by the character of the primary disease. The greatest improvement was shown in cases of chlorosis, but distinct amelioration was also perceptible in anæmic conditions induced by previous or still prevailing disease.

Ferratin does not reveal a special type of action; the most that could be observed was

that with a certain quantity of hæmoglobin in the blood a slow increase manifests itself.

Greater fluctuation was exhibited by the behavior of the red corpuscles, but the general result uniformly exhibited an increase of these; both this increase and the content of hæmoglobin in female patients failed to reach the point of elevation achieved in men similarly treated.

With respect to the favorable effects ascribed upon defæcation, no special experiments were made; in no case was any difficulty observed in this respect; as a matter of fact the larger number of patients had no previous difficulty in this way.

The action of the preparation on the stomach was even more pronounced, for all patients treated speedily exhibited vigorous appetites.

Several cases treated in the Clinic with Blaud's pills also yielded favorable results, such as would naturally be expected; but the administration of Ferratin during the same interval yielded a much higher proportion of hæmoglobin than Blaud's mass. The former is accordingly a valuable curative agent in cases in which we are accustomed to observe success following the administration of iron preparations, viz., in chlorosis, in anæmia, and in anæmic conditions consecutive upon other diseases.

The action of Ferratin upon the multiplication of red corpuscles and upon the increase of hæmoglobin in the blood is prompt and copious; the favorable effect upon the general health is obvious.—DOCTOR M. BANHOLZER, in *Internationale Klinische Rundschau.*

A FEW NEGLECTED DRUGS.—While treating a case of measles, the eruption being somewhat slow in making its appearance, I received several kind suggestions from neighbors with regard to driving out this disturber of the internal economy of the child. Among others I obtained one worthy of being recorded. I was assured of its efficacy, for the mother of my informant had employed it with blooming results in his own case when the disease was obstinate and "would not come out." A few deep draughts of this remedy accomplished the desired result.

The remedy is quite simple, and requires no complicated apparatus for its preparation. In short, it consists of a good and strong "tea" of sheep's dung, in unlimited quantities, and administered according to the judgment of the parent, *ad libitum*, *ad nauseam*, etc. He was certain of its activity, for it had been employed quite extensively in the neighborhood. I thanked him for his kindness; I believed that it ought to expel any exanthem; but I have never used or recommended it. The community in which I practice is nearly exclusively German, and it is possible that this stercoraceous recipe came from the "Fatherland." I have been told by old German physicians that dung enters quite extensively into the domestic practice of the German country people. A German peasant came to a friend of mine, a physician in Middle Germany, with a boil on his nasal protuberance, which was thickly covered with a coating of unctuous human fæces.

During the Middle Ages there appeared in Germany a famous work entitled, "Die Dreck Apotheke" ("The Dung Pharmacopœia"), which presented all the recipes, methods of preparation, quantities, etc., of the different kinds of ordure, both human and animal. It is quite a voluminous work, and is now sometimes referred to.

In the *Lancet-Clinic* of September 30th, 1893, reference is made to an ancient French medical work, where dried human dung ("occidental civet") is recommended as possessing "many medical virtues." "The dried dung, distilled in a retort, yields an oil which is particularly serviceable in the treatment of erysipelas and other skin diseases." Celsus, in his work, "De Medecina," recommends many varieties in the treatment of disease: the fæces of swallows, lizards, doves, sheep, goats, etc., each have their particular indications. In snake-bites the dung of goats, boiled in vinegar and placed upon the wound, is a sovereign remedy—"*stercus caprinum, ex aceto coctum, super vulnum imponendum,*" etc. (page 255). Sheep's dung reduced to a powder is an excellent application in the treatment of carbuncle, at least it was in those days when Celsus experimented upon his servants and slaves, who could not help themselves. "*Deinde ipse quo medicamentis urendus, maximeque chalcitide cum melle, aut ærugine cum cocto melle, aut ovillo stercore fricto et contrito cum codum melle*" (Celsus, liber vi, page 320).

In stone bruises, in children, where the swelling is painful and tense, and the little sufferer lies awake and cries half the night, a beneficial local application is assured by the country people of this vicinity to be a large, fat and unctuous poultice of cow's dung: it should be gathered soon after it is passed, and the whole foot wrapped in the soothing mass. It is said to ripen the swelling in a few hours, immediately soothe the pain, and so soften the skin that it is easily removed. I have never employed this measure, but I record it that so simple a means be not lost.

It would not be especially applicable in city practice, for various reasons.—Doctor F. H. Pritchard, in *Cincinnati Lancet-Clinic.*

Water Vibriones and the Ætiology of Cholera.—Koch recently endeavored to lay down definite rules for the identification of the pathogenic agent of cholera from other comma organisms. Apart from the information furnished by the microscopical characters of the vibrio in question, and the appearance of the peptone and plate cultivations, he claims his bacillus possesses two essential properties which distinguish it from allied vibriones, viz., its indol-nitrous reaction (red reaction) and its pathogenic action. On the other hand, Doctor Sanarelli discovered and studied a large number of vibriones, closely resembling the comma bacillus, in Seine water where pollution is greatest, in the sewage from some of the collecting sewers, and in the sewage effluent at Genevilliers. Without entering into detail, it may be mentioned that some of these organisms were found to possess pathogenic properties and all the characters which are said to be specific of the comma bacillus, while others resemble the virulent vibriones so closely one cannot help regarding them as varieties of the same micro-organism, capable under favorable conditions of recovering their virulence. In view of these facts, Sanarelli declines to admit that the cholera comma bacillus can be differentiated from other allied organisms by the characters described by Koch; as a matter of fact, he is opposed to the unitarian morphological conception of cholera vibriones.

The constant presence of pathogenic vibriones in sewage leads him (with the majority of hygienists) to believe that contaminated water plays an important part in the origin and propagation of cholera; but these vibriones, although extremely virulent to begin with, rapidly lose their pathogenic properties and subsequently their power of producing indol and reducing the nitrates. Under the influence of a change of *milieu* these organisms lose their virulence and acquire saprophytic properties; but they may regain the former under favorable conditions. This would account for certain epidemics of cholera, the origin of which could not be traced to importation from without; and Sanarelli believes that the epidemic of cholera which broke out in France in 1892 actually originated in the neighborhood of Paris, for there is no evidence whatever of its having been imported from the East.

The origin of the vibriones met with in water as saprophytes, and which are in reality attenuated forms of pathogenic bacteria, more or less completely deprived of their virulence, is, however, still very obscure; but it is suggested by the author that they might possibly be derived from the intestinal dejections of man and perhaps of animals.—*North American Practitioner.*

Uterine Fibroids.—Doctor T. W. Adams offers the following:

Whenever a woman has a myo-fibroma of the uterus she can be benefited either by operation or treatment: Whenever tumor is myo-fibro-cystic an operation alone is of avail: The elective method of palliation or cure in any given case must be governed by the condition of the patient and the condition and relations of the tumor present: Certain cases in which muscular tissue largely predominates, can be benefited and rendered entirely inert by the use of properly selected therapeutic agents; such are reduced in size and rendered harmless by *Salix nigra* and Ergot—this does not, however, cover every tumor of this class: In certain cases, therapeutic agents, if not curative, render an operative interference safe and of more easy performance—locally by lessening engorgements and loosening adhesions by contractile effects, and constitutionally by relieving symptoms and thus allowing the attainment of a better general condition.—*Medical and Surgical Reporter.*

Acid in Diabetic Urine.—Doctor Derignac finds in diabetics the total acidity for twenty-four hours is usually about normal, and increased in direct proportion to the amount of sugar; it also increases in ratio to the amount of urea. He presumes that it likewise increases in proportion to amount of phosphates. When the amount of acid reaches, and particularly when it exceeds, five grammes in twenty-four hours, Derignac does not hesitate to employ energetic therapeutic measures. His mode of estimating the acidity of the urine is as follows: A Moore's pipette containing a solution of caustic soda titrated with dry oxalic acid is employed to pour the solution into a known quantity of urine. This is stirred with a glass rod until it begins to turn a light-colored red litmus-paper blue. Then the number of cubic centimeters of solution needed to neutralize the quantity of urine tested gives the amount of acid by a very simple equation.

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Original Articles.

DIPHTHERIA AND ITS MANAGEMENT.

BY DOCTOR JAMES SAMSON.

In accepting the invitation to contribute to the MEDICAL AGE an article on one of the very deadliest of all diseases, and one that in the aggregate destroys more life on this continent than scarlet fever, yellow fever, typhoid fever, smallpox, and cholera, all combined, I shall treat the subject largely from a clinical standpoint, and avoid as much as possible what might be properly designated a technical or scientific discussion of the question. Our recent text-books and journals are already rich with the history, pathology, details, and disasters of this deadly malady. I shall put myself where we are all so often placed, at the bedside of one of the younger children of a household, and take my readers through all the routine that I have adopted as my particular mode of attempting to save the child and the remainder of the family.

Having satisfied ourselves that the case is indeed diphtheria, it is incumbent as one of the very first duties of the physician to locate the source of the contagion. Something can be done in this way to protect the household, and the instances are, I believe, not very many in which the origin of the outbreak cannot be traced.

It should be widely known that the germs of the disease, be they what they may, are in constant circulation in the atmosphere of the whole country in perhaps all seasons, and continually lodging and then rapidly multiplying wherever a fruitful field may be found for their production. Decomposing vegetables and fruits, the rotting foundation of the house, decomposing starchy and nitrogenous materials of almost any kind, are all fertile fields and common sources of the disease; and an especially fruitful spot, particularly in rural districts, is near the kitchen door, where perhaps for years the greasy slops of the pantry have been thrown, and where a child is so easily exposed to the multitude of germs vegetating in this hot-bed of organic matter.—It is here that the house cat, hunting for scraps, so often contracts the disease and carries it to the child that caresses it. And notwithstanding the doubts that have so often been expressed as to whether the cat is easily subject, or subject at all, to the contagion of diphtheria, I have convinced myself that it is, and that it is a more common cause of its reaching the inmates of the home than is often suspected; and the cat too, with all its vitality, falls a ready victim to the fatal poison of the disease, sometimes infecting and rapidly sweeping away a whole community of its race.

The advent of sewer gas to a house, though believed to seldom carry with it the germs of typhoid, comes often laden with those of the more deadly diphtheria, and should be sought for most diligently. So imperfectly does the science of sewer-ventilating and house-plumbing seem to be understood in most of the cities and towns of our continent, or so inadequately is the work performed, that the cause of this particular disease is only half hunted for when this very probable source is overlooked.

To the school house, of course, may be traced the origin of many an outbreak, and not the least among the evils here is the plan of indiscriminate ownership of pens and pencils, adopted in so many of these institutions.

And then as a mode of infection, there is the old forgotten case of chronic nasal diphtheritis that may sometimes be encountered in our search. The instance well established some years ago, in which the same sewing woman poisoned a family three times within a year, is one full of instruction.

But to the case itself. It is most unsafe to predict with much positiveness the future of the patient from a first examination, but there are many hints that may be gained

on an early visit, and all are of importance. The color and character of the deposit, its location, its slow or rapid growth, the constitutional vigor of the patient, or rather the presence or absence of constitutional symptoms, are all valuable aids in helping to diagnose the probable course of the disease. But it must never be forgotten that the small white patch in the fauces, spreading very slowly, and never presenting any very serious appearances, is, in the winter and the later autumn months, and in children under eight years, much more likely to end in all the horrors of diphtheritic croup, than are other cases in which all the early indications were vastly more unpromising. The case in which, with a considerable fever, the peculiar characteristic breath, a marked expression of constitutional languor, there is an enlarging patch on one or both tonsils or on the pharynx and already changed to a yellowish or brownish color, though perhaps not more than a day old, is certain to assume a grave form and certain to endanger the patient's life, no matter what his age or how active the treatment. There is comparatively little danger of the disease going to the trachea, but in two days more the throat will be putrid, and in the gangrenous mass of decomposing tissue and membrane with the poisonous diphtheritic toxalbumen will be millions of Loeffler's bacilli and the staphylococci and streptococci of pus-formation, all ready to invade the entire system by absorption. And in this same two days the membrane will have climbed around to the uvula and up into the nares, where it is hard to reach, and where lymphatics are more numerous and absorption more easily accomplished. And the dangers in this case will multiply with every hour, and will continue long after the last particle of membrane and fever and fetor have disappeared; and this patient will only live because of the vigor of his constitution and the wisdom of his treatment, and the continual vigilance maintained long into his convalescence.

But all cases are not so harassed by dangers, and there is still that class where there is little the matter and little to do, and perhaps no danger at all, and where a gargle of chlorate of potash is so often said to have done what a little salt and water would have done as well, or perchance better; and that other common class where the slow-growing whitish membrane never becomes very wide or very thick, and never reaches the nares or trachea, and never grows dark or putrid, but slowly disappears with no necrosis of tissue and no absorption of toxines or pus bacilli to poison the heart or destroy the kidney. This is the happy case which I believe the physician so often creates for himself by the vigor with which he attacks the disease at its outset or before its visible outset; and many a life could be surely saved if it were widely known among the people that there is not a moment to temporize when the first suspicious symptom has been manifested. The best day of all the days to see the patient is early in the morning of the first day of his illness, and a better day still, I firmly believe, would be a week before it, if we could but know of his contracting the contagion.

And this leads me to say, whether it be right or wrong, that I have for a long time looked upon the tincture of iron as of more value as an internal remedy in diphtheria than all others combined. So sure do I think I am of this fact that for many years I have never left a house on my first visit in any form of this disease without putting every child in the family on free doses of this drug, three times a day, in the fullest confidence that this is the best possible preparation for the attack that in all probability is impending; and a long series of observations has satisfied me of the wisdom of the precaution. And in saying this I think it proper at the same time to condemn the practice of giving this or anything else to anyone with the promise that it is a preventive of the disease. The antidote to diphtheria is not yet known, nor is it likely that it ever will be.

And so before my patient is ill I give him iron, and while he is ill I give him more of it, and with it plenty of the richest food and alcohol, from the hour the breath is offensive or the membranes dark or even yellow; and I verily believe that iron and food and whiskey, and air and quiet, and still more whiskey, are about all there is to borrow hope from when this destroyer comes to us in its worst form. These convictions are not specially my own in any sense of the word. They are, I believe, the conclusions of most men who have seen much of the dis-

ease; and the hundred and one other drugs that have been suddenly lauded by investigators and experimenters have most of them been as suddenly forgotten.

The stronger chloride of mercury would seem to promise well in those slowly progressing cases that at length invade the trachea, and there are those who pin all their faith to it, but the positive proofs in these very cases are hard to produce, and only many experiments and long observation in a hospital could perhaps settle whether the virtue attributed to this drug is a reality or delusion.

A very eminent author in a recent work still talks of chlorate of potash as a remedy. I have discarded it many years ago in this and every other disease that human flesh is heir to, as a drug useless everywhere, unwelcome in the stomach and unsafe in the kidney, and especially in the kidney already excited with the premonitions of impending disaster. It secured admission into the materia medica by the aid of a chemical delusion, and is, I believe, sooner or later doomed to banishment from it. Wherever it has been indicated in this particular disease I prefer ammonium muriate, and have the patients every hour take a swallow from a glass containing this in solution and a small quantity of the iron tincture.

In this connection it is worth remembering too that the stomach seems more tolerant always of large doses of muriate tincture of iron when small doses of ammonium muriate are added. This glass of water and iron and sal ammoniac I use in lieu of a gargle, knowing that in swallowing it reaches the diseased surface and in gargling does not, or at least so seldom and to such a limited extent as to make this mode of application in any throat disease well-nigh useless. No antiseptic gargle of any kind need, however, be interdicted: gargles disinfect the mouth and to some extent contribute to the cleanliness of the case.

For local application, I have no desire to urge any special preference. Chlorine-water, chloride of iron, chloride of mercury, salicylic acid, peroxide of hydrogen, all have their friends and all seem to meet the indications more or less, but for a long time I have depended on a mixture of tincture iodine, acid carbolic, acid acetic, and glycerin, in varying proportions, but usually as in the following formula:

℞ Acid acetic, ʒ j.
Acid carbolic, ʒ j.
Tr. iodine, ʒ iiss.
Glycerin, q. s. ad ℥ ij.

This I apply every three hours for two days only, or during that time in which the membrane tends to its most active growth. And whether or not this mixture is really as efficient at this stage as I have believed it to be in checking the growth of the deposit or controlling its character, I do know that the manner of its application is a matter of much concern. The first drop of blood produced in manipulation of a diphtheritic throat is a calamity, and the first attempt to wipe off or rub off or pull off the growing or dying membrane is a professional crime: Of this I am as certain as that blood-letting in smallpox should be made manslaughter. And so I warn the nurse, and with a bit of dry raw cotton-wool (not absorbent) twisted on a twig, dipped in the glycerin mixture and handled lightly as a feather, I touch the young and growing membrane (and no other part of the throat) every two or three hours, asking the patient, if old enough to understand, to not swallow and to keep the mouth open, for two or three minutes.

To him who prefers the insufflator during this time, there is sulphur, or sulphur and quinine, or sulphur and salicylic acid, and other and newer combinations of which I have no practical knowledge. It is now that hydrogen peroxide has come to the front with such very strong promises, and its conduct and chemistry both vouch for its honesty. I have never yet seen great benefit from any spray at this stage of the disease, and look on the atomizer as the most awkward and unreliable of all the apparatus at our disposal during this time. But, in two or three days more, when the whole throat is perhaps putrid, with rotten masses of membrane and tissue hanging to its walls, the constant-current spray of potash-permanganate solution will do a great deal locally, more indeed than any other drug of which I know. But leave the membrane alone unless it hangs loosely enough to clip away. Below it is an angry, half-dead surface gorged with blood that is defibrin-

ated to absolute poverty, and he who recklessly exposes this surface will rue it.

Days before this, though, the nares have been invaded by an enemy that must be dislodged early if at all, and nothing but local treatment will avail here. Do not depend on a spray now, but use a syringe, and none is so good or so easily used as a rubber bulb attached to a foot of small tubing, or, better still, to a medium-sized soft catheter where the rounded end and the aperture in the side are both advantages. Boric acid in strong solution, or a 1-to-100 carbolic acid, or 1-to-1000 or 1-to-2000 solution of mercury bichloride—this last with enough chloride of sodium added to make it welcome to the nasal membrane—these are among the list of applications, and, with the syringe, may have the great advantage of being always warm.

This much for this aspect of the case, but the very mild attack of a week ago, or a day ago, may now be in the trachea, and the worst disasters of all impending. Not much of hope is there left now, nor is there much to do. Tracheotomy, intubation, and the inhalation of lime-laden vapors, constitute about the entire catalogue of resources. It should be now if ever that the perchloride of mercury should bring us help, and it perhaps sometimes does, but so seldom as to hardly put it safely among our list of friends. It has been my fate more than my fault to have seen but little good come from either tracheotomy or intubation, because in rural districts we never see either, except on dying patients, where a post-mortem a few hours later would reveal the membranes descended in nearly sixty per cent. to the divided bronchi of the second, third, and fourth dimensions. In expert hands and early cases, and with all surroundings well ordered, these operations will save many a life, but the percentage will always seem feeble. Neither of them will ever do what is impossible to be done, and patients with tubes in the trachea will always still die because of descending membranes far too low to reach. It is in this condition of affairs that I have seen much good from the inhalation of warm vapor, laden with lime, commenced early, used patiently, and long continued, and it has been my lot to see patients enough rescued in this way to help me speak positively of this one remedial measure. But all devices for throwing a spray of lime-water in the child's face are unsatisfactory, and I believe useless. A piece of quicklime dropped into boiling water and the vapor directed into the child's face or into a canopy over its cot is the true mode, and there are many devices that may be employed for the purpose. Many years ago, in an epidemic of such cases as I am describing, I adopted a simple apparatus which surprised me with its efficiency and which I have often used since. The accompanying engraving represents it sufficiently well to

help any tinsmith to reproduce it cheaply: a tin tank, say seven inches in diameter or about the size and height of the ordinary creaming milk-can, the lid slipping over the outside and ending in a gradually tapering tube turning away to the side about two feet, with a very slight upward direction, and ending in a nozzle of half or three-quarters of an inch. Into this put a couple of quarts of boiling water and a lump of fresh burned lime; set it back from the bed (over which there is a canopy) four, six, or eight feet, according to the volume of steam, and for a few minutes the child will be in a cloud of medicated vapor, and without either alarm or disturbance. This may be often repeated, and a spoonful of turpentine, or turpentine and eucalyptus oil, adds perhaps a little to its value, and something to the wholesomeness of the surroundings. This and all the other

treatment may be continued as long as there is a single ray of hope or as long as indicated, but the large doses of iron given earlier will not be tolerated now and must be lessened.

And now, as we near the end of it all, when the membranes are gone, and the nose clear, and the breathing comfortable, and no trace of fœtor or fever left, there are still grave features to contemplate. The steadily increasing pallor, the feeble pulse, the albumen-loaded urine, all tell of a system passing through a saturation of deadly poison, and of defibrinated blood, and of millions of devitalized corpuscles. A picture of impending death from helpless and hopeless inanition is what it really too often is. The heart runs very fast or very slow and wants to stop. The stomach forgets its functions and refuses the help the system is calling loudly for. The child, raised in bed but a moment, may be dead in a minute. For two or three days, perhaps ten of them, life will hang suspended by the feeblest thread that ever has to support it in all the emergencies of human existence. Stimulants, and gentle feeding, and strychnia, and warmth, and absolute stillness without a moment's forgetfulness, may still save the patient, but nothing else can. In a fortnight longer this same child may attempt to cross his room and die in the middle of it. And weeks later still, if he lives, he may have double vision or little vision at all, or lose his power to speak or walk or even swallow; but electricity and nitrate of strychnine and the hypodermatic syringe and rectal alimentation will save him now in any or all of these final emergencies.

Windsor, Ontario.

REMINISCENCES OF MEDICAL STUDENT LIFE FIFTY YEARS AGO.*

BY DOCTOR EDWARD WORTHINGTON.

Spinning yarns before the camp fire, and in the home circle, it had often been said to me, "Well, if you could only write your stories as well as you tell them they would be rather amusing." But I was not then to be seduced into such an adventure. Now, however, that I am an invalid, and have passed the "regulation allowance" of three score years and ten, the time drags so wearily along that I have listened to the suggestion of a friend—"Why don't you write a story and send it to one of the magazines?" So here I begin with a series of short stories, which, in reality, are not stories at all, but emphatically true—in every word and incident related.

When quite a youngster I was indentured before a notary public to Doctor James D——s, a very eminent surgeon in the ancient city of Quebec. There being no medical school in the Province at the time, this was the usual custom.

The Doctor lived on Mountain Hill, in a house now used as a hotel. It was built when the country was under the dominion of France, and a remarkable house it was—and probably is to this day. It was built on the slope of a steep and tortuous hill, and built apparently to last forever. The foundations had been laid at the foot of the slope, on Notre Dame street, near the site of the historic Church of Notre Dame des Victoires, and the building was carried up so as to have two stories on Notre Dame street, and two and a basement on Mountain Hill; the house thus fronting on two streets, each having its distinct and separate entrance, one shut off completely from the other.

The first story on Notre Dame street consisted of warehouses and wine-vaults; the second was a private residence.

The Mountain Hill side, on the contrary, was not *in trade*, it was strictly *professional*. Passing through its large drawing-room you saw a splendid circular staircase which led to a glass-covered cupola, and out on a leaded roof, giving a promenade the full length and breadth of the building, and commanding a glorious view of the Citadel above, the St. Lawrence and St. Charles rivers below, the beautiful Island of Orleans, the Falls of Montmorenci, and the distant Laurentian Mountains, with the lovely slopes of the Beauport shores, from Ancien Lorette to Ange Gardien. Such a magnificent view to be once seen, is to be always remembered. At the foot of this circular stairway stood a huge stuffed moose, with immense horns, a trophy of the Doctor's skill as a hunter, and nearly every celebrity of the day who visited

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Quebec called and asked permission to see the moose: Admiral Sir George Cockburn —it was he to whom was intrusted the charge of conveying Napoleon to St. Helena,— Charles Dickens, the Marquis of Waterford, Lord Charles Wellesley, Lord Powerscourt, Count D'Orsay, Sir James Macdonnell, the hero of Huguemont, and others too numerous to mention. But all have now gone to the "Spirit Land." Where the moose is I do not know.

This stairway was used only in summer, when the family and their visitors wished to enjoy the grand view from the roof promenade, and it was always a matter of surprise why the dwellers in Notre Dame street should have been denied this great privilege. But it was reserved for one of the ghosts of my story to discover that it had not been always *thus*. In fact, a very narrow private stairway had been made for their benefit, but, this being objected to by the "upper crust," it was closed up, and in time its very existence was completely forgotten.

Before my time, the basement referred to had been used as a dissecting-room, but that had been moved to the attic, and the dissecting-room converted into a kitchen! Just for the sake of pleasant associations! The presiding genius of the kitchen—old Kitty—was Irish, a strict Protestant, but, when in extreme peril, not above crossing herself and appealing to all the saints in the calendar. She slept in a cupboard-bed in the kitchen, knew what this room had formerly been, and was prepared accordingly—every mouse was to her a ghost in disguise. "Why, then, Master Edward," she would say, "not a night of me life that they don't come and sit across me legs, and dance on me chest, and then lift me up—bed and all—up—up—until, my jewel, I think they are going to shut me up intirely, when I wakes wid a scream, an' comes down wid a jump. Not for worlds—no—not for me weight in goold would I stay in this house another day, but for the Missus, the darlin'!"

"Now, but Kitty, what did you have for supper?"

"What did I have for supper, is it? Just a glass of beer and a bit of bread and cheese; sorra thing else."

"Well, Kitty, don't you think it might have been the cheese?"

"Arrah, then, honey, don't you think I am old enough to know the differ between *them* and cheese? The craythurs, they'd never harm one any way—God be good to them—but they've been cut up in this room, and they likes to come back to it."

I do not wish it to be supposed, for one moment, that my familiarity with Kitty is any proof that I had a "mash" on her. It used to be said in Ireland, and perhaps elsewhere: "Whatever you do, keep good friends with the cook." Kitty was an old maid—she could not help that—under proper facilities she might have been a grandmother; she was old enough! But she came from the *dear owld sod*, not far from where I was born, and it was pleasant to hear her talk of owld Ireland, and its fairies, and its churches, and round towers, and blarney stones, and how St. Patrick banished the snakes from the island and drove them all into the *say!*

The family spent the summer in the country. So Kitty and I had the house to ourselves a great part of the time. I am afraid that, in spite of my friendship for Kitty, she saw a great many ghosts in those days, but she was very forgiving and thought it was all done for her own good.

A day of retribution, however, came at last. That kind of thing is sure to come, sooner or later, upon the wicked. I saw a ghost myself, and in that very kitchen.

Smoking was a luxury to be indulged in cautiously in that house. Lucifer and Congreve matches and phosphorus bottles were unknown. Only the old tinder-box, with its flint and steel, could, in the absence of a fire or a lighted candle, be relied upon to light a cigar.

One Sunday evening, knowing to a certainty that I was alone in the house, I went down to the kitchen for a light. A man sat on a chair in front of the coal-stove, his feet on its hearth, his elbows on his knees, and his face on his open palms. I had firmly believed the man-servant to be out, but there sat some one. I passed behind him, and coming to his left side stooped down to open the stove door. He did not move. Not one foot. So I said, in my blandest tones, looking up at the same time: "Will you have the

goodness to move your foot? I want to open the door." If I had had my hat on I would have taken it off, I was so awfully civil. No, he never moved. I repeated my request, without result. So, losing patience, I pushed the door open forcibly. It opened back to its hinges, but the feet never moved. *The stove door went "right straight through" them!*

I stood up quietly—with my eyes fixed steadily on the figure. I had always heard that that was the correct thing to do when attacked by a lion! I had seen it recommended in books of Eastern Travel. I had never traveled myself much, nor was I ever attacked by a lion, but this man never moved—he was worse than a lion, and I might be annihilated at any moment. Oh! for a word from old Kitty. She would have prayed to the saints for me. I had to act for myself—and I acted quietly—oh, so quietly. I feared to disturb that "questionable shape." I retired backwards with my face to the foe—until I reached the foot of the stairs, and then! *then* I took about eighteen steps in three bounds! Never before was such "time" made on that stairway.

This was the first *ghost*—I may as well call it by that name as by any other—I had ever seen. I had not been eating cheese, and I had not, then, ever tasted beer. I firmly believe to this day that I saw what I have described, and as I have described it, "and further deponent saith not."

If tobacco had never been discovered, or if parlor matches had been introduced, and I had not been obliged to go to the kitchen for a light, would that "poor ghost" have been there?

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Years afterwards I saw another shadowy form, which I may as well get off my hands while I am about it. It was not in Quebec, but where I am living at present. Driving out professionally one summer evening, just before dark, as I was coming to a bridge over a tiny streamlet I saw in front of me, and not twenty yards off, a man in a nut-brown suit, with a pack on his back. He was in the middle of the road, and walked as if fatigued, so I said mentally, "Poor old fellow, I must give you a lift." At the moment I had to attend to the bridge, which was narrow and had no railing; when I looked up the man was gone. It had been raining slightly—but there were no fresh footmarks to be seen, no stone or hillock or tree behind which a man could hide. I got out of my trap and looked everywhere. *No peddler! no pack!* Months afterwards I was passing that spot again, having with me a man I picked up and whom I had known for years. As we neared the bridge he said, "*That is the spot where the man is seen.*" "What man?" "Oh, did you never hear of him; he has been seen off and on for years—dressed in a brown suit, with a pack on his back. He has never been seen for more than a moment at a time." I verified this statement afterwards, and declare most positively that I had never spoken of the circumstance to any one. It was said that years before, a peddler, or back-woodsman, going to one of the lumbering shanties, had been murdered in the neighborhood, but nothing definite was ever known.

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For a couple of years the united wisdom of the medical faculty on Mountain Hill was devoted to the case of Paddy Quin. As his name implies, he was by birth an Irishman—by occupation a stevedore, and he was the unfortunate proprietor of a pair of very poor legs. During the summer months he was at work loading ships engaged in the timber trade, and if there was a big stick or a sharp-edged "*deal*" "convaynient," Paddy was sure to rub his shins against it; and this being repeated day by day, by the time the summer was ended and Paddy's occupation gone he was ready to spend the winter and all his earnings in "undergoing repairs." Poor Paddy—as simple and good-hearted an Irishman as ever lived—he was passed along from one student to another, and one and all gave him up—or rather his legs—as a bad job, until at last he was handed over to me. I strapped and bandaged—applied lotions and ointment to those unfortunate legs, in the most orthodox manner—for a whole winter without result—that is, without any good result. One day he was better, another worse. What between my want of success, and the "chaff" of the other sawbones, I was of all men most miserable; but Paddy, if

not proud of my skill, admired my perseverance and always had a word of encouragement. "Well, may the Lord love you anyway; you are willing to try—and do what you can—but what am I to do next summer when the shippen be's comin' in?"

I lost sight of Paddy for a while, and when he turned up he had a line of treatment to propose which was emphatically new and striking—in fact, tragic. An old woman from Ireland had told him of a remedy, and "would I help him to try it?" "Of course I would do anything in the world for you, and you know it, Paddy." "Indade, I do, sir, but I don't like to tell you what it is." After a good deal of persuasion, it came out that his countrywoman had suggested the passing of a dead hand over the sores on his legs; it had cured lots of people in Ireland. "Well," said I, "sure that is easily done." "Arrah, then, how and where am I to get a dead hand?" "Oh, Paddy! We have lots of them in the house, this minute. What kind of one would you like?" "Faith, then, and sorra one of me knows, but she said a black naygur's, if it could be got, would be the best." "By George," said I, "you are up to your knees in clover, Paddy. We have a most elegant n'gger upstairs this moment." "Glory be to God! I heard you had such things in the house, but I was afeard to spake of it, for fear you'd think I'd tell." "Don't say that again, Paddy; I'd trust you with my life; only tell me what you want to do, and I'll do it."

What was to be done was to be done at the silent hour of midnight—the moon to be at the full—and none to be present - but himself.

The following night would do, so it was arranged that he would be on hand at 11.30. In the meantime I would get everything ready.

The scene of operations was to be the new dissecting-room. This was in the attic, down the centre of which ran a long, narrow, dark passage. On one side was a rubbish-room, on the other a line of small rooms originally intended as bed-rooms for the servants. The doors had been made, and stood on end, unhinged, against this partition—in this narrow passage — and here the passage abruptly ended in a door, the door of the dissecting-room. This room had one large dormer window, fronting on the River St. Lawrence, and as the moon came up over the water its light "slept" brightly and beautifully on the poor "subject's" face; the table was wheeled up so that not one beam of light was lost. Elephants' and lions' and tigers' and crocodiles' skulls lay on the floor; men's, women's and children's heads—*galore*—were ranged on shelves round the room; skeletons of men and animals, down to Bandicoot rats, were there; "dried preparations," too, abounded; arms and legs, and a few at full length, were in "review order" standing at "attention" round the room. It was a lovely sight, but one had to get accustomed to it—to be comfortable, particularly at midnight.

Paddy Quin was sharp on time, but as I had a few touches to give to the room at the last moment, I asked him to sit down a minute and rest himself. He had a raw potato in his hand, and as I left the room he said pleasantly, "Well, I'll cut this up, while you are away— just to amuse meself."

With a stick of phosphorus I made a few artistic touches, in the orbits, along the lines of the ribs of the skeletons, and on the walls, until the whole room presented a brilliant phosphorescent display. Then I led Paddy Quin up, but I must confess that I did so in fear and trembling; I might be carrying the thing too far. It was crüel, I confess it, but I was young, and always rather too fond of a lark; but I poured balm into Paddy's ears, as I took him up, and vowed I would stick to him through thick and thin—like a brother!

When the door was opened, and Paddy looked in, he gave a jump back, and cried out in dismay, "Holy mother, I can't do it." But I said: "I'll go in before you, to show you there is no danger. Don't look round; don't mind what you see—at all—you want your legs cured?" "Arrah," says he, "it's aisy for ye to talk, so it is." "Well, Paddy, it's getting on the edge of twelve; if you are going to do it, do it; if not, let us go." "Ah well, be aisy—be aisy a minute." Then he added: "You are not to look in, and I am not to have a candle; lave me to meself, but for the love of heaven don't stir out of this. If I want you I'll call." He then walked in with a courage equal to facing a masked battery.

I had a little peep-hole all ready, and this is what I saw:

The brave fellow walked up in fear and trembling to the side of the table; he put his right foot on a low stool beside it, bared his leg, and then—*then* came the tug of war; but Paddy was equal to it; he took the right hand of the "subject" and passed it slowly down over his bared leg; when this was done he knelt down, crossed himself, said a "Pater Noster" and "Ave Maria," *and then* placed a small square of raw potato on the table beside the body. This he did nine times—each time *keeping tally* with *a piece of potato.*

Then he came to the door and said in a dry whisper, "LET ME OUT!"

As I look back upon that night, I regard that act of Paddy Quin's as one of the grandest religious ceremonies I ever witnessed, grand in its simplicity and trusting faith. Many a soldier who had fought in the great battles of the world would not have entered that room, at that time!

I did not meet Quin again for two years. I had been in Edinburgh, and on my return he was one of the first persons I met. "Well, Quin, I am glad to see you, and how are the legs?" "By St. Patrick, sir, you did me a good job that time; they have never troubled me since that night—Glory be to God!"

***

Next in order I must relate poor old Kitty's adventure with her own particular ghost, and how its appearance led to the discovery of the dark staircase that had been so long shut up as to be forgotten.

When describing the rooms in the attic, I should have stated that one small room—the first one—was finished; it had a door, and a lock and key, and was the store-room of the house, and a very inconvenient one too. If Kitty wanted a "drawing of tay" she had to go up two pairs of stairs, to this store-room, which was at the entrance to the dark passage; she knew what was at the other end! This passage was always dark, dark at midday, and she was most careful to get her supplies in the daytime.

One Sunday evening, however, she was obliged to go up for something; it was between the two lights—and as she was putting the key in the lock, a woman in white walked up out of the darkness. Kitty had a lighted candle in her hand; a lighted candle is by common consent admitted to be a protection to a certain extent against uncanny visitants. But the moment she saw the woman she dropped her candle. The woman smiled at her, and said, "Who lives here?" Kitty, thinking it wisdom in the face of the enemy to be civil, replied, "Doctor D——s." "Oh," said the woman in white, "*and what is in that room at the end of the passage?*"

This was coming to close quarters; it was, in fact, in legal phrase, a leading question, too leading for Kitty, so she ran down stairs screaming, and when she got to the bottom she gave way to the most bitter lamentations. She would "not stay in the house another night, just as if a dacent woman could not go about her business without being molested in that way. It was only natural that the poor craythurs would be allowed to go back to their quiet graves—to sleep in pace—and not be mayandering round the world to try and find where they belonged."

It certainly was very extraordinary where that female had come from. It seemed utterly impossible that any living being could find his or her way into that passage. The only possible entrance seemed to be by the big front door, or down the chimney and out through an eight-inch stove-pipe hole! The Doctor came in at 9 o'clock and joined in the chase.

It is not very pleasant to know that the sanctity of home can be invaded mysteriously by a woman—even in white. If by a woman, why not by a man—why not by burglars?

A careful search was made at once, at which every one in the house assisted.

> "In the highest, the lowest, the loneliest spot,
> We sought for her wildly, but found her not."

At length our efforts were rewarded, and the mystery solved. Four unfinished doors and some loose boards stood on end against the partition in the passage; on removing these we found another door, exactly parallel with the door of the dissecting-room, and which this lumber had hidden. A panel had been recently removed from this door, and in the dust on the floor were plainly to be seen the marks of fresh footprints. As the

door was fastened from our side with screws, it was soon taken down, and the footsteps followed. Such a pile of dust, such curtains of cobwebs, and such a musty, sickening smell! But down we went in Indian file—the stair was too narrow to admit of any other line of march—until at last we heard voices, and saw a light through a keyhole. The Doctor knocked and a woman within said, "Oh, Missus, don't let them in; it's me they're afther." But the Missus opened the door and the mystery was explained. While the family were out in the afternoon, the servant girl, being of an inquiring turn of mind, determined to open a door in a deserted corner—and see what was beyond. "No sooner said than done." She had her reward in a stairway full of dust and cobwebs. Up she went until something barred the way. She had no light, but groping about carefully she loosened and removed a panel, squeezed herself through, and was rewarded by coming out in the dark passage above, close to the dissecting-room door. Looking through the keyhole made her wish to "inquire within,"—but at that very moment Kitty came up to the store-room door. She could at the same time gratify her curiosity and establish friendly relations with the stranger; so accordingly, but with timidity, she diplomatically asked: "Who lives here?" and "What is in that room?" When Kitty screamed and ran away—to give the alarm, as she supposed—she ran away too. "She meant no harm; she was only lonesome, and hoped to be forgiven," and she was. It was a pleasant solution to what promised to be a very great mystery. The Doctor had lived for ten years in that house, and knew nothing of this dark stairway, and the dwellers in the lower regions were equally ignorant.

The discovery of this dark passage, however, was not without further result; for one of the students, hearing of Kitty's adventures, and being blessed, or otherwise, with a most inordinate amount of curiosity, went down one day to see what he could see, and returned with several bottles of very choice wine. After having lost his way, he had suddenly found himself in a large vault, surrounded with shelves loaded with bottles, and he had brought up a few to sample them. The result was so encouraging that for many days he went down and returned with spoils. At last the poor boy came in one day looking rather depressed. Most affectionate inquiries were made as to the cause of his melancholy. That day at dinner he had heard his father say to his head clerk: "John, have you noticed that that famous Port of '96 in the Duponts' vaults has been disappearing mysteriously? Some one is stealing it!"

* * *

There is a general impression that a dissecting-room is very dirty and very disagreeable. Of course it may be, but is not necessarily so. It cannot, under the best of circumstances, be called "home-like" in appearance, but a "post-mortem" examination for family reasons, or an "autopsy" in the interests of justice, may be infinitely more disagreeable.

When one settles down to the quiet dissection of an arm or leg, or the following-out of the distribution of the branches of blood-vessels or nerves, it is rather pleasant than otherwise, especially, as often happened in those "good old days," when the ladies of the house would bring in their work, sit down for a pleasant chat, and manifest a deep interest in the surroundings; and then it was so pleasant to explain to them all the mysteries that were explainable. And this was more than half a century ago, before the idea of entering the medical profession had ever been contemplated by the coming sovereigns of the universe.

Sherbrooke, P. Q.

PERNICIOUS VOMITING OF PREGNANCY.

BY JOHN G. CECIL, B.S., M.D.

About three years ago, in a paper before the Medico-Chirurgical Society of Louisville, I took the ground, which was controverted by several members of the Society, that death resulting from uncontrollable vomiting of pregnancy was not only possible, but more common than the profession are disposed to admit; also that the induction of abortion at the proper time is a sure means of relief; and, finally, that when every other measure of relief has failed, abortion is not only justifiable but demanded. In confirmation of this

opinion, the recent report of two fatal cases in the same vicinity within a short space of time is, to say the least, significant. There is also, to my mind, a strong probability that some of the fatalities attributed to abortion should be reported as deaths from pernicious vomiting, because, even among those whose views coincide herewith, abortion is not only considered a *dernier ressort*, but induced too late to be of service. Certainly it is not right to wait until the woman is dying from starvation and exhaustion, induce abortion when the operation only adds shock to an already hopeless condition, and then ascribe the fatal issue to the measure; and yet such, I believe, is done in not a few instances.

Not long since, in consultation with Doctor Morrison, of Prospect, Kentucky, I saw the following case:

Patient, thirty-five years old, mother of three children, in rather delicate state of health; two and one-half months advanced in pregnancy. As nearly as she was able to reckon, the vomiting began with the day of conception, and it persisted with increasing severity, despite all remedies, until a day or two before her demise. I only had the opportunity of seeing her upon two occasions —first about two weeks before her death, and again the very day before that event. On the former occasion I found her very weak, much emaciated, in great distress from the constant nausea, rejecting everything introduced into the stomach; pulse rapid and weak; tongue coated, and breath foul; very little fever, and this not constant. Nearly every remedy of reputed efficacy had been tried without avail. Vaginal examination disclosed the gravid uterus retroverted and exquisitely tender.

The displacement, as is undoubtedly true in many cases, I deemed responsible for the obstinate vomiting, and I hoped by reposition and sustaining the uterus in the proper situation to afford relief. This accordingly was done, and a soft cotton tampon placed in the posterior vaginal fornix. I did not deem it advisable or necessary to advocate immediate abortion, but urged maintaining the organ in proper position by daily renewals of the cotton tampon, and, in the event of not being able to do this, if the vomiting persisted, to dilate the cervix up to (but not through) the internal os; finally, if this latter procedure proved ineffectual, to stretch the internal os with the finger, with the view of favoring expulsion of the fœtus; in the meantime, rectal alimentation was also to be tried.—I may add that there had been evidences of impending abortion for several weeks, and in the hope this would occur spontaneously we were still less disposed to adopt severe measures.

At my second visit the physician in charge reported he had not been able to retain the womb in good position, and that he had dilated the cervix as far as the internal os, with no apparent benefit; the rectum had so soon become irritated that little or no nourishment could be retained, and the only thing the stomach would tolerate was a small quantity of egg albumen dissolved in water.

The patient was now in a desperate condition, not unlike that seen in the third and fourth weeks of typhoid fever. Immediate induction of abortion was advised, and the necessary steps at once taken. Following an antiseptic vaginal douche, a steel dilator was employed, the neck and the internal os dilated, and a soft rubber catheter introduced between the membranes and the uterine wall. This, however, proved of no avail, as she died twenty-four hours later undelivered. The fœtus was partially expelled only a few hours before death, but the muscular force apparently was unequal to completion of the act.

Urinalysis revealed no evidence of kidney lesion, and the fever toward the last was continuous and of low grade. There can be no doubt of the cause of death in this case, and I wish to put it on record as due to pernicious vomiting of pregnancy.

In all discussions of this subject there are two pertinent questions: First, will abortion relieve the condition, and: Second, when is the proper time to bring it on? As regards the former query, there is little divergence of opinion; most practitioners hope for this to occur spontaneously, and almost without fail the vomiting ceases when it does occur. —The only statistics bearing on this that I have seen, sustain the same view. Gueniot collected 118 cases, with seventy-two recoveries and forty-six deaths; without abortion after diversified treatment, thirty-one recovered; after induced or spontaneous abortion, forty-one recovered; of the deaths, twenty-eight occurred without abortion, seven after spontaneous and eleven after procured abortion.—It will be observed more than half the recoveries were after abortion, and more than half the deaths without abortion.

It is upon the second query that greatest divergence is expressed. When is the proper

time, and what are the indications for inducing abortion as a measure of relief from intractable vomiting, or when should we decide between the dangers of expectation and the chances of operation? I know of no truer guide or better answer to this question that vexes the judgment of all who grapple with it, than the differentiation proposed by Dubois and Chomel, who divide the disease into three stages: *First*—Characterized by insufficient nutrition, emaciation, debility, and altered features; ptyalism may be present, but there usually is little or no febrile action: *Second*—Symptoms of the first stage grow more severe; attacks of vomiting are more frequent and violent; the emaciation increases; finally fever sets in with a pulse of from 100 to 140 per minute; the mouth becomes dry, the thirst intense, the breath acid and fœtid: *Third*—The attacks of vomiting cease or become less severe, fever persists, and the pulse is 120 to 140; attacks of syncope and cerebral symptoms soon come on; there are intolerable neuralgic pains, disordered sight and hearing, hallucinations, delirium, coma, death. Regarding the favorable time for operation, these authors say:

The production of abortion in the third stage of the disease is liable to the grave objection of not saving the patients, but of hastening their end and compromising our art. If done in the first stage, there would be the not less serious error of sacrificing a pregnancy which might perhaps have progressed happily to its term. Therefore we conclude that the operation is applicable to the period intermediate to those mentioned.

The second period is characterized by almost incessant vomiting, induced by all kinds of food and sometimes also by the least quantity of pure water; by debility so great as to keep the patient at rest, and occasionally by syncope; by continued fever, and in certain cases by a fœtid and even putrid breath.

I most heartily concur in the conclusion arrived at by Playfair, that where abortion has failed it seems to have been on account of undue delay. If, therefore, it is done at all, it should be before prostration has advanced so far as to render the operation useless.

Louisville, Ky.

AN ADDRESS.*

BY EDWARD W. JENKS, M.D., LL.D.

For the past six months we have met several times each week in the clinical room or the college amphitheatre, so that you are not strangers to the sound of my voice; but to-day we meet differently than ever before. You have been engaged for some years in preparing for this event. You have worked in the laboratories and have studied the mysteries of the human frame in the anatomical rooms. Amidst stifling odors of the dissecting-room or surrounded by what others might call the loathsomeness of disease, you have sought after more knowledge, and when the day was done, either the private instructor has drilled you in the teachings of the lecture room, or you have studied the works of commended authors. You have had during the years of your medical pupilage constantly in view the accomplishment of a purpose which is consummated to-day.

By the choice of my colleagues the pleasing task devolves upon me to be the first to welcome you as our peers—Doctors of Medicine. Our relations as pupils and teacher no longer exist, for we now stand on the same professional plane, bound together by the same fraternal ties, and all enlisted for the same combat against disease and for the good of humanity.

For some years and in three different States I have taught medical students; and as each year I have seen graduating classes received into the ranks of our ancient and honorable guild, I have thought what is to be the future of this one or that one to whom the words have been said and the parchment delivered declaring them Doctors of Medicine. I find this interest increasing within me so that to-day I almost wish I might have the power imputed to the astrologers of old of casting the horoscope and foretelling by the stars the future medical life of each of you. And yet without doubt it is better that such power is denied me, for possibly I might be grieved to find that there are some of whom the Faculty are expecting great things, but who, instead of becoming giants in medicine, will stop growing on receipt of

* To the Graduating Class of the Michigan College of Medicine and Surgery, March 29th, 1894.

their diplomas and gradually dwindle into mere pigmies. It is known to every medical teacher that there are found in every class some who are satisfied with just enough knowledge to obtain their diplomas. These represent the kind who are willing to stand still. I beg of you to remember that you cannot stand still in medicine—for, like one upon the ancient treadwheel, to stand still is to go backward—it is death. The times in which we live, the constantly increasing facilities for obtaining knowledge, the progress rapidly being made in every direction and in every department of life where the human intellect is called into action, permit of no useful place for the *stationary man.* The student who aims to acquire barely sufficient knowledge to obtain the Doctorate is apt to remain a "stationary man." The recent graduate who acts as if he believed that success and even distinction are attainable through family influence or the possession of wealth himself or in the hands of relatives, is apt to cease growing and remain a "stationary man." The young physician who believes that, notwithstanding it was a somewhat difficult matter for him to obtain his degree at home, a brief sojourn in some European hospital is the one thing needful to make him an accomplished physician, the envy of his former classmates and one upon whom honor will be thrust and whose success is forever insured, is apt to be a "stationary man." This sort is liable to cease growing when he sails for home, and never get beyond what he saw in Europe and what was told him there.

I might mention many other causes which often prevent the young physician from growing to the full stature of professional maturity. It is sometimes through a mistaken idea of what constitutes success. If success were measured wholly by a money standard, then some of the brightest lights in the grand galaxy of the medical firmament, whose names are immortal, have not attained success. Some of them have been like the noble gentleman, the profound and accomplished scholar, who simply designated himself Louis Agassiz, Teacher, and when asked concerning his wealth, said that he had not time for making money. He, like many of the great scientists and learned men of the world, was recruited from the ranks of the medical profession.

Another mistaken opinion quite commonly held is, that success is the rightful heritage of genius. But what has been done and is daily being accomplished for the advancement of the science and art of medicine, are not the chance scintillations of resplendent genius, but the results of work.

It is a right and proper thing for every graduate, if circumstances permit, to study, not idle, in the hospitals of the Old World. It is a duty for every physician to provide for his own and insist upon a just remuneration for his services—but success cannot be measured alone by money. There is a pecuniary success and there is a professional success, and, while the two are not incompatible, one should not be mistaken for the other. As an illustration, it not unfrequently occurs that the poorly qualified physician has acquired good business habits that enable him to save and acquire money, while it is a deplorable fact that many of the brightest and best minds in the profession do not possess this quality. I shall not on this occasion discuss the relations of money to professional labor; I prefer to call your attention to some of the higher demands and opportunities which the study and practice of your profession present.

The one who deals with the condition of the human body has a field without limit. Within that organism called the individual there are mysteries that, with all our boasted advancement of knowledge, neither the scalpel of the anatomist, the skill of the microscopist, nor the exact science of the chemist has ever explored. This unexplored field is open to you.

The young soldier when he buckles on his sword and goes forth to battle may feel all the heroism of history calling to him. This is an ambition which aspires oftener to selfish glory than to the good of humanity.

Doubtless many of you have resolved that the profession whose portals you are now entering shall be the pathway to wealth, social position, and an honorable name. Such ambition is not to be despised, it is to be praised, for it leads to trained faculties and that broad culture which makes the accomplished and useful member of society.

Yet this ambition, like that of the young soldier, is largely a selfish one and aims at individual aggrandizement. There is, I think, a still higher aim than this for the earnest student. It is that high ambition to serve your profession rather than to make your profession serve you. To serve your profession is to enlarge its boundaries, to discover new truths, new means of cure, methods of lessening human suffering, of prolonging life, and to increase the efficacy and power of the healing art. This is the higher service to science and to mankind which will last till time is no more.

Such service cannot be rendered by one who on receiving his diploma ceases studying and working and stands still.

We respect, reverence, and sometimes possibly envy, the masters of medicine. We forget that these became eminent for their learning, proficiency and skill by diligent, patient and continuous labor for years, rather than by being endowed with superior faculties or favored of fortune. We fully recognize that many have been richly gifted by nature and fortune, but neither the gifts of nature nor fortune enabled Hippocrates to lay the foundation of rational medicine, Vesalius to rescue anatomy from the slavery of ancient opinion, nor Harvey to trace the circulation of the blood. Other qualities than those of genius are necessary to induce men to spend months and years demonstrating the structure of the body in health and the changes which take place in disease.

Time would fail me in the attempt to mention the names of those who, without genius and without fortune, but with the highest ambition, have labored for our beloved profession. I will therefore mention only a single name. The life and labors of the famous pathologist, M. Louis, are an emphatic illustration of the value to the medical profession of intelligent work. Practicing medicine with success in Russia from the age of seventeen until thirty-three, by accident his attention was directed to the writings of Broussais. Careful study showed him that while Broussais proved others wrong, he was far from establishing the truth himself. Hence Louis determined to give up all private practice, all selfish ends and pleasures, and devote himself to the one task of rigorous, impartial observation. For this purpose he entered the Hospital of La Charité at Paris as clinical clerk. For seven years, during the flower of his life, he observed and recorded all that could be learned at that time respecting the history of disease. The results of his work are well known. The name of Louis and that of typhoid fever are united by a bond that naught but the dissolution of the universe can break. His work on phthisis, based on the history of post-mortem examination of one hundred and twenty cases observed by himself and carefully recorded at the time, is only less celebrated than his work on typhoid fever.

It is perfectly apparent to every student of medical history that the patient toil of such men as Louis has accomplished much more for the profession and humanity than has ever been done through the inspiration of genius.

Remember that there is no royal road to success in our profession; wealth cannot insure it, genius cannot command it, nor does it come as a natural gift—it is attained. Those who have become in any sense eminent know full well the patient and sometimes painful toil through which success is attained, and *those who in the end have triumphed are only those who have worked.*

It is easy to understand, with the limits to which our mental powers are confined, how, in the past as at present, so-called "schools" of medicine have arisen. Ignorance and bigotry are fruitful sources of division, dogmatism, and endless disputation. But there can be but one school worthy of the name; it is not a *pathy* nor an *ism* nor a form, it is the school of medicine, broad and catholic in its ideas and scope, "one which assumes as its own the whole existing accumulation of medical knowledge, and which claims all future discoveries as its inheritance." There can be but little doubt that if our studies and investigations are broad, liberal, and pursued in the spirit of true scientific inquiry, they, more than anything else, will tend to bring the science of medicine to that unity which will leave all dissent and differences to quacks and impostors. In pursuing these studies and investigations, one cannot but be impressed with the fact that medicine as a true science is preëminently a profession of phys-

ical science, necessarily dealing with the facts of nature and their relations. Physical science is inexorable in demanding proof for everything that is claimed to be a law or fact of nature. We may cheat ourselves and others with mere theories, but we cannot impose on nature. It has been said by a prominent writer, "Nature is a rigorous creditor and exacts from us the last farthing. No matter how cunningly we build a false system, how we sanctify it by age, custom, or piety, Nature's reckoning will come at last and topple down our idol with disgrace." In the study of physical science it will not do to recoil from any new fact, though its aspect be unexpected or even unwelcome. I do not mean that you should not go armed with caution and rigorous scrutiny, that you may be sure that what you seem to see is real and that you see it right; but when clearly seen, you should have an undoubted faith that the new fact can be neither an enemy nor an intruder. For every truly scientific man must feel that all the facts of nature have the same divine origin and stand in their places in the same divine order and harmony! Physical laws are not blind forces, but reflect an Infinite Intelligence, and true medical science lifts its votaries to as much broader and clearer vision of this intelligence as does the telescope the observer of the natural heavens.

I urge upon you that in your studies and investigations you keep your minds open and hospitable to every new fact. I assume that although hereafter you are to be known as practicing physicians and surgeons, you will never cease to be students of medicine. As physicians and surgeons the distinction I would present is between a career which merely practices the profession as a routine without growth, and one which aspires and labors to enlarge and advance it. Of necessity there are some who are mere practitioners without special aspirations except to perform the daily routine of their labors in a respectable and quiet manner; such are not to be spoken of disparagingly, yet, from the standpoint we are now looking at physicians, no particular praise can be awarded them; they follow the lead of masters, simply remaining through life debtors to their profession, the profession never owing them anything.

But they who go beyond the footsteps of any predecessors and bring some unexplored field within the domain of human knowledge, add so much to the intellectual wealth and power of their race, and often to their security and happiness.

The domain of the physician, as modern society is constituted, is not confined to the body alone. He has to deal with the body changed by the operations of intellect and passion.

To the impetuous demand of Macbeth,

> "Canst thou not minister to a mind diseased,
> Pluck from the memory a rooted sorrow,
> Raze our the hidden troubles of the brain?"

The astonished apothecary could only reply:

> "Therein the patient must minister to herself."

But the physician of to-day can take refuge in no such answer, for mental diseases pertain to the duties of his profession as much as do those of the body. And, as has been eloquently said by a learned member of another profession while speaking of the treatment of mental diseases, "there the art rises from the mere manipulation of material physic, to those finer remedies which seem almost akin to the power which healed though but the hem of a garment were touched."

How inspiring then is the summons which calls fine and generous minds to a field of study and investigation like this!

The great discoveries of the past should be felt not as a discouragement but as a spur to new investigation.

History relates how a great soldier sighed that there were no more worlds to conquer. A wider knowledge tells us that his life had no better foundation than his ignorance and his arrogance. The soldier of science who feels that he has in him the true mettle for conquest, will never sigh for new fields to win. Until our limited faculties shall compass the illimitable we will not reach the bounds, for the realm of science is boundless. To-day it only needs a broader culture and that insight which it begets for the reaping of larger harvests.

Why I plead so earnestly for study and work is because the world of this generation is very exacting in its demands upon the science of medicine. "It stands to-day facing human wants and necessities more delicate,

more important and more urgent than it has ever before encountered."

To meet these demands and provide for these necessities it is not alone to exact a higher professional education, but to allow none but those with cultured and well disciplined minds to begin the study.

I beg of you as you value the good name of your profession, not to be guilty of encouraging anyone to begin the study of medicine that has not received a thorough preliminary training and education. The world is not clamoring for uncultured and poorly educated physicians. Do not help deprive the farmer or the mechanic of what might render him efficient service, to furnish faulty material for the medical profession. Or to use a homely phrase sometimes applied to another profession under the same circumstances, "a good cobbler was spoiled to make a poor preacher."

In conclusion I will merely say that I, as the representative of the Faculty on this occasion, bid you welcome to our ranks, to the ample rewards and abundant labors of a profession which I trust you will ever remember has been sanctified for all time by divinity itself, as evinced by the wonderful precepts of Moses, the healing of the sick by Christ and his disciples, most notably by that one who will be known to the end of time as the "beloved physician."

Detroit, Mich.

QUACK MEDICAL ADVERTISEMENTS REFUSED.

Our gratification at finding the following prominent notice on the title-page of the *Farm Journal* leads us to quote it entire:

"No quack medical advertisements in this paper—not one. Yet dearly would they like to get in. This very month we could have had a thousand dollars' worth without the asking. And we call this simply 'fair play' to our readers. Would it be more than 'fair play' on your part to send us a club of five or ten subscribers in recognition of our efforts to keep our columns clear of such trash?

"Rogues shall not ply their trade at the expense of our subscribers, who are our friends, through the medium of these columns. Let this be understood by everybody now and henceforth."—*Medical News.*

Correspondence.

RETAINED TESTICLE.

Editor MEDICAL AGE:

In your journal for March 26th you quote from a paper by Doctor Joseph Griffiths on "Retained Testis," which as much as says that the male of our domestic animals, as well as man, are not capable of begetting their kind.

This is certainly an error, as Doctor Griffiths might have learned by asking any old farmer. It is no uncommon thing to find colts at the age of two with but one testicle in the scrotum; and every farmer knows what a pest these horses are. They are perfectly capable of "getting colts," and must be kept shut up the same as stallions. I have one of these half-stallions that was driven for some years by a friend who is now driving a colt from this same horse. I am quite sure the same thing has been seen in dogs, only neither testicle ever appeared in the scrotum.

FRED HUTCHINS.

Woodbridge, Cal., April 4th, 1894.

THE INVERTED RETINAL IMAGE.

Editor MEDICAL AGE:

How the brain receives the impression erect has long been an unanswered question, due probably to our imperfect anatomical knowledge and the simplicity of the reason.

It is readily explained by the twist or half-turn made upon itself by the optic nerve between the chiasm and its entrance into the eyeball. Thus it is seen that as the impression of the inverted retinal image is transmitted by the optic nerve-fibres to the brain, the half-turn made in their course places the image upon the brain cells in the erect position.

I am informed by the principal of the Shawnee, Ohio, public school that one of his pupils invariably draws everything upside down. His optic nerves are evidently malformed, the fibres running straight back to the brain instead of making the half spiral turn necessary to erect the image.

Respectfully yours,

G. A. HARMAN.

Lancaster, Ohio, April 10th, 1894.

Society Meetings.

WINDSOR PHYSICIANS AND SURGEONS' ASSOCIATION.

The regular meeting was held Tuesday, March 6th, 1894, at the residence of Doctor Carney.

Present: Doctors Carney, Samson, Bell, Ashbaugh, Cruikshank, and Brooke.

A communication was read from Doctor J. L. Bray, Chatham, Ont., concerning one "Doctor" W. E. Bessy, and placed on file.

Doctor Samson exhibited a very interesting case of neglected pleurisy, with dislocation of the heart to the right side.

The Secretary was instructed to order one dozen copies of the MEDICAL AGE for those members of this Association who are not already subscribers.

Adjourned, to meet Tuesday, April 6th, at Doctor Ashbaugh's office.

Pursuant to resolution the Association convened at the office of Doctor Ashbaugh.

Present: Doctors Bell, Reaume, Prouse, Kenning, and Ashbaugh.

President Samson urged the members to keep up the interest in the Association by presenting papers and interesting cases as often as possible.

Doctor Samson then exhibited a specimen of uterine fibroid, explained the operation for removal, gave a discourse on the differential diagnosis and treatment of uterine fibroid, cancer, polypoid and fungoid growths, and cited a case of miscarriage complicated by polypus.

Doctor H. R. Casgrain's paper on "The Operation of Curetting the Uterus" was read by Doctor Ashbaugh, owing to the illness of the author.*

DISCUSSION.

Doctor Reaume thought paper was short but complete, and had nothing to say in the way of criticism. It was only within the last two years he had summoned up courage to employ the curette; had used it in recurrent hæmorrhage due to retained products of conception, and was often surprised to find a very small piece of placenta, sometimes as small as a pea, the cause of so much trouble and loss of blood.

Doctor Bell had used the curette to some extent; generally preferred Thomas's blunt instrument.

Doctor Cruikshank protested against the use of the sharp curette after recent miscarriage, as it has often resulted in death from perforation. He would use nothing but aseptic finger-nail, as membranes are soft and products can be removed quite easily. After a month the curette may be necessary, or where there are fungoid growths, etc.

Doctor Samson thought the operation as described and performed by Doctor Cruikshank was not, properly speaking, entitled to be denominated curetting.

In cases such as excessively painful menstruation with the throwing off of a membrane (membranous dysmenorrhœa) the operation of curetting often proves extremely useful: The instrument should be used very cautiously—held very lightly in the fingers. After four months the curetted membrane is perfectly restored, and gives the woman a chance to become pregnant safely; before this she is very liable to miscarry.

Adjourned to meet at Doctor Samson's Tuesday, May 1st, when Doctor Brooke will read a paper on "Treatment of Scarlet Fever;" Doctor Cruikshank will also present a paper, subject not announced.

D. E. BROOKE,
Secretary.

Windsor, Ontario,
April 17th.

*Paper to be published in MEDICAL AGE of May 10th.—ED.

THE VALUE OF THE HANDS AND FINGERS.

Surgeons have often to estimate the chances of saving injured hands, and the comparative values of hands and fingers. According to a scale of value furnished by the miners' unions and miners' accident insurance companies of Germany, the loss of both hands is valued at one hundred per cent., or the whole ability to earn a living. Losing the right hand depreciates the value of an individual as a worker seventy or eighty per cent., while the loss of the left hand represents from sixty to seventy per cent. of the earnings of both hands. The thumb is reckoned to be worth from twenty to thirty per cent. of the earnings. The first finger of the right hand is valued at from fourteen to eighteen per cent., that of the left hand at from eight to thirteen-and-one-half per cent. The middle finger is worth from ten to sixteen per cent. The third finger stands least of all in value; although, like other useless members of the community, it is surrounded by riches, its value is only from seven to nine per cent. The little finger is worth from nine to twelve per cent. The difference in the percentages is occasioned by the difference in the trade; the first finger being, for instance, more valuable to a writer than to a digger.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., APRIL 25, 1894.

Editorial.

ANOTHER NEW IDEA.

It seems as if there were a vast number of designing persons in the world who believe the medical profession as a whole represents a milch cow, from whom is to be derived an income with the mere trouble of verbal milking. Moreover, they apparently hold the entire profession as the most ignorant and gullible portion of society!

Certainly this supposition is warranted by the numbers of new preparations, duly copyrighted, trademarked or patented, that are continually being foisted upon the market and attempts made to force them into therapeutics; the vast majority of which are worthless *per se*, while the remainder are only common every-day representatives of the materia medica offered at exorbitant prices under fancy and misleading titles.

One of the latest brought to our knowledge purports to be a "blood iron," or iron "united with proteid matter as it exists in the blood itself, and consequently not only "a valuable essential iron tonic, but a highly nitrogenized food." Again, that it is "a proteid compound of iron combined with a large amount of oxygen (*sic!*), which is readily dissociated when taken into the system;" also, "it will not respond to the usual iron tests," which is "true of all proteid compounds of iron such as albuminates, peptonates, etc."

This is not only the height of absurdity, but of impudence! As has been shown before the Pharmaceutical Society of Great Britain by Professor Dott, the so-called albuminates and peptonates of iron are utterly inert and useless, and this new (?) preparation, which "will not respond to the usual iron tests," is offered to the profession with a high-sounding title and a surfeit of plausible and specious nonsense calculated to catch the unwary reader, and deceive all who are not thoroughly "up" in chemistry. As a matter of fact, the preparation on analysis proves to be merely a dried blood—and the iron of the blood being not only most minute in quantity, but an effete product, is neither absorbable or assimilable. It is a product already worked over by economic energy and ready for excretion; having made hæmoglobin once, it is incapable of so doing again. The artistic touch regarding the large amount of oxygen which is "readily dissociated," etc., we must confess is a cut above our philosophy—or indeed that of any other individual possessed of any knowledge of chemistry.

When will the profession learn that the laity are not proper judges of therapeutic medicaments or effects, and are quite the reverse of physiological authorities; also that high-sounding names and catch literature, whose sole purpose is the gathering of dollars and cents, is the curse of a profession that has the one great drawback—only too palpable—that while it may be practiced as an *art*, it is not and never can be an exact science? How long are physicians willing to be the catspaws of designing individuals who have no interest in the profession, or in medicine *per se*, except in so far as to reap the harvest that can be forced or stolen from it?

UNCONSCIOUS DELIVERY.

Within the guild of charlatans, a common method of opening the purses of the ignorant and unwary is by means of circulars and pamphlets addressed to "suffering womanhood," wherein is cited as an axiom that the torture peculiar to childbirth obtains solely among females of the human animal, being a heritage from one of the sex who was unfortunate enough to dally with the Serpent in the Garden of Eden; that women need not suffer if they only knew the secrets of the author and would avail themselves of his "priceless" service, offered "at the extremely low rate of," etc.

It is, however, very far from truth that woman is the only animal that suffers during the act of parturition. It must be manifest to any practical observer that all animality reproduces its kind only as the sequel of "sorrow and travail," though not always

alike in degree. The anatomical and physiological relations and conformations of the generative organs preclude painless delivery except under special and abnormal conditions. The dilatation of the genital canal, and especially of the orifices of the uterus and vagina, and the powerful expulsive efforts essential to the completion of the act, cannot occur without special irritation that, beginning in the nerve-centres, is communicated to the muscular tissues, requiring of the latter their utmost limit of endurance. The groans and expulsive efforts of the mare, the cries and contortions of the dog and cat, the restlessness and bellowing of the bovine, all evidence the culmination of gestation is the reverse of pleasurable; and finally, the very fact that the most powerful and imperative of all passions implanted is the reproductive one, is convincing that it was deemed essential to insure the preservation of the races and to overbalance the suffering which culminates in perpetuation, "each after its kind." Isolated cases of painless delivery do occur, however, but they are rare, and, as already remarked, abnormal both to animal and human kind—most rare in the latter, obviously; so rare, in fact, that medical jurisprudence declines to take cognizance thereof, and will not accept as a good and sufficient plea in case of certain accidents even under the most favorable conditions. But that such should be entitled to legal consideration within reasonable limit has recently been evidenced by two cases occurring in France and Belgium respectively:

The first is reported in the *Annales de la Société Médico-Chirurgicale* by Doctor Gabriel, who was called to attend a woman in the eighth month of pregnancy, and found the cervix dilated, the bag of waters occupying the os, but the pains feeble. For seventy-two hours she thus lingered, making little or no progress, and at six A.M. on the morning of the third day the os was no larger than a five-franc piece, and the membranes not yet ruptured. At this hour, just after an examination, the patient went to the water-closet to stool. Scarcely was she seated ere a violent pain supervened; she gave a loud scream, and the next instant there was a splash in the water. Unable to rise, she was forcibly lifted, when her child was discovered with its head completely immersed in the water and apparently dead; the cord was unbroken and the placenta intact. The infant was resuscitated, but died the same afternoon.

The second case is chronicled by Le Blonde in the *Journal de Médecine de Paris*. A woman who had been seduced and deserted was seized with slight colicky pains, but continued at work. In the course of the following night she was attacked with a still more severe pain, when, surmising an action of the bowels might give relief, she seated herself upon a chamber utensil, and with the first strain the infant was born. This alarmed her greatly, but she cut the cord, wrapped the child in a cloth, walked down stairs, and with fear and trembling informed the people of the house of what had happened. Violent flooding followed, and the patient was not seen by Le Blonde until the succeeding morning, when the placenta was delivered.

Both cases afford the materials for conviction of infanticide had the mothers been placed under different surroundings. Had the children been delivered and fallen into a public vault, it is almost certain that no legal functionary could have been found who for a moment would have believed the truth. A verdict of willful infanticide would have been sure to follow.

This teaches that too much care cannot be exercised under such circumstances, and that the previous history and character of the mother should be taken largely into account; and also that the benefit of the doubt should always be in favor of the prisoner. How many convictions of innocent women may have occurred is beyond surmise. That they are few, is probable. But it is more than possible, however, that some innocent unfortunates have been made unjustly to suffer as criminals.

FOR WHOSE BENEFIT?

Under this caption a contemporary, the *Southern Clinic*, utters some telling hits which we take the liberty of paraphrasing in order to render the point made more adaptable to the community at large:

"Every now and then we witness a desperate effort on the part of medical schools to get appropriations of money for the estab-

lishment of hospitals in which it is proposed to treat medical and surgical cases at reduced rates. In other words, these schools are bidding for patronage that rightfully belongs to their own graduates. Strictly analyzed, this constant siege on the public funds under the guise of doing a great good is nothing more or less than an outright demand for public money to aid weak and unnecessary institutions in maintaining a further existence, and securing additional advertising for those running them; finally diverting practice and the exhibition of charity from their proper channels.

"When the physicians who are running these medical colleges come before the public and ask that medical and surgical cases be sent to them that they may be '*properly* and *successfully* treated,' they virtually and actually offer an insult to the vast army of intelligent and well qualified medical men; they would impose a great hardship on the sick person in long travel and increased expenses, and, at the same time, in parading their great superiority they exhibit a disgusting amount of impudence and gall.

"We have county hospitals, and good physicians and surgeons all over the land. Many of these physicians hold diplomas from the very schools now bidding for their practice and claiming they are incompetent. We will guarantee the assertion that in no State is there a lack of good physicians and surgeons fully capable of attending any case that might be sent to cities—provided the money was at hand to pay for same. This is what is lacking, and instead of putting it where it will do the most good for the speculators, let it go where it will help the needy, and not entail useless and enormous expenses to enable them to enjoy the same."

CINNAMON AS A BACTERICIDE.

It will be a remarkable sign of progress if science, in its endeavor to discover a preventive, has to fall back on a sanative application almost forgotten since the days when our grandmothers were young. We call to mind an old gentlewoman, born the latter part of the last century, and hale and hearty in the fifties of this, whose mysterious pocket, of vast containing capacity, and always borne to "kirk," was ever redolent of cinnamon. If any virtues were, in those days, ascribed to the spicy bark, we never heard of them. A little of it now and then, for tongue and teeth to toy with, was judged to be in some way beneficial to assimilating the words of him who "wagged his pow" in the pulpit, but beyond this knowledge ended. The latest announcement in the interests of medical science is that of M. Chamberland, who positively declares no living disease-germ can resist for more than a few hours the antiseptic power of essence of cinnamon. He regards the essence as being not less effective in destroying microbes than corrosive sublimate: "even its scent will kill them!" If this is true, it constitutes most *agreeable* information. Further, a decoction of cinnamon is recommended not only in influenza cases, but in typhoid fever, cholera, etc.

DEATH OF JOHN H. RAUCH.

This well known gentleman, resident in Chicago, and formerly President of the Illinois State Board of Health, was found dead in bed at the residence of his brother in Lebanon on the 24th ult.

His great work, for which every medical man should bear him in grateful remembrance, was in the direction of raising the standard of medical education in the State of Illinois. Through his influence the licensing power rests entirely with the State Board of Health, with whom also the acceptance of diplomas is discretionary. Thus was established a standard of requirements which compelled medical colleges to establish preliminary examination, to lengthen their course, and to more conscientiously carry out the requirements for the degree of M.D.

DEATH OF CORYDON L. FORD.

This gentleman, well known as an anatomical teacher through the length and breadth of this continent, died at his residence in Ann Arbor on the 14th inst.

On the Thursday previous he delivered his last lecture in the college year, completing his fortieth anniversary of active work as an anatomist. He had not intended to continue

longer in active work, but was to be given an emeritus professorship.

Doctor Ford gave all his time and energy to teaching, and as a consequence contributed little to the literature of his chosen science. He was as well known to Canadians as to Americans, having long held the same position in McGill University as that occupied in the University of Michigan. He also at various times was teacher of anatomy in Geneva Medical College, Castleton Medical College, the Maine School of Medicine, Berkshire Medical College, and Long Island Medical College, besides one or two other minor institutions.

In recognition of the great service he had rendered in building up the Medical Department of the University of Michigan, Doctor Ford was honored with the degree of LL.D. in 1881. The medical faculty, moreover, had planned to celebrate a few weeks hence the completion of Doctor Ford's long and valuable services in the University in a fitting way, and Professors Oliver Wendell Holmes and Burt G. Wilder had been asked to join in the jubilee. But now "instead of placing the wreath of honor upon his brow it will be laid upon his grave." As a teacher and as a professional man he was noted for his constant devotion to duty, loyalty to truth, and deep religious life and earnest faith; always gentle, kind, and considerate, wise in counsel and steadfast in action, his character was one worthy of all honor, and his life a continual source of benign influence to all who came in contact with him. "Full of years and honors, rich in good deeds and in the love of all who knew him, he has gone to his great reward."

FASTING AND TÆNIA.

Doctor M. S. Moore considers the rule of requiring patients to fast during the administration and ingestion of tænicides not only injudicious but pernicious—a fact which we readily corroborate. In his experience not alone as regards patients, but personally, he discovered it advisable to ingest a reasonable amount of food both at night and in the morning, and then to administer the tæniafuge about ten A.M. Moreover, he recommends crackers and cheese with each dose of medicine, and adds that at about four P.M. he usually secures the entire worm, including head. He insists that by keeping up digestive action in stomach and bowels the expulsion of the worm is aided, and that the segments (including head) will be found in connection with, and often imbedded in, the fæcal matters.

EDITORIAL NOTES.

Requires Confirmation.—

Doctor Cook, of the Peary expedition, declares there is an almost entire absence of sexual desire in the male Innuit during winter—corresponding with the absence of menstruation of the female; but with the advent of summer and the appearance of the sun he becomes very amorous, and the greatest number of conceptions takes place at this time.

It is very strange that such explorers as Hayes, Kane, Hall, and others who have passed months in immediate contact with the Innuit race, have failed to appreciate a circumstance which one individual appears to have discovered in a few brief weeks of but semi-intercourse with the natives.

Gonorrhœa in Women.—

Doctor Carey, who has made extensive researches among prostitutes and fallen women of other classes suffering from vaginal discharge, in the *Lyon Médical* makes the statement that only in about one-third of the cases is the gonococcus of Neisser to be detected. In four out of five cases examined, when present its seat was in the urethra; but once in five times in the cervix; and the periurethral follicles, Cowper's glands, vagina and anus were exceptional seats of the germ. He concludes gonorrhœa urethritis in women is the almost exclusive source of the disease in men, and the absence of discharge, pain and local tenderness tends to hide the source of contagion.

Tolerance of the Brain to Foreign Bodies.—

The practice of abdominal surgery rapidly destroyed the awe in which the profession had previously stood of disturbing the peritoneum. The ideas with reference to the

delicacy of the brain, and the danger of interfering with it, seem to be undergoing a similar change.

Estes recently employed a conical cup of gold-foil to tampon a lacerated wound of the cerebrum and check the outflow of cerebral tissue. The wound healed, the case went on to satisfactory recovery, and the man when last heard from was going about without more inconvenience than if the gold-foil had been plugged into his teeth.

Spring Medicine.—

How often is the demand made for a "spring medicine" in consequence of the old and fanciful theory that the body at times contains certain "humors" which only particular drugs can relieve! In consequence the vernal season is the harvest of those who dispense purgatives and pills.

The tendency to medicine-taking is already too great, and met with everywhere. Physicians should teach their patrons and friends that "drug tippling" is pernicious, that a well person needs absolutely no drugging, and that medicines under any circumstances should be employed only as the result of skilled advice.

Writer's Cramp.—

Remdiett claims to have relieved this malady by subcutaneous injection of carbolic acid at the sensitive point and in the course of one of the flexor tendons of the forearm.

This remedy would, in the main, be almost too objectionable and radical. Much more satisfactory doubtless would be the recommendation of Langes, to hold the pen between the second and third fingers in such way that the holder rests upon the latter at an angle of from ten to twenty-five degrees while supported below by the thumb.

Professor Gangee.—

Virchow's Archives publishes the death of Doctor Arthur Graham Gangee. Through some inadvertence the editor of the *Archives* imagined the report of the demise of Doctor Gangee's only son to appertain to the distinguished physiologist himself.

Doctor Gangee is in excellent health, and in the laboratory of the University of Berne has just completed an important research on the spectra of coloring-matters of the blood.

A Proper Line of Action.—

A most readable contemporary, the *Canadian Practitioner*, announces that in future its eighty pages of reading matter will not be marred by the presence of "inserts" or fly-leaves of any description, nor will they contain so-called "reading notices."

We congratulate the *Practitioner*, and hope that not only all the Canadian, but all reputable journals of the United States, will follow suit.

Prevalence of Malignant Disease.—

Cancer is said to be most common in Russia, Norway, and Switzerland; in Geneva out of every 10,000 deaths upwards of 500 are said to be from this malady. Doctor Herbert Snow, of the London Cancer Hospital, declares that mental worry is the chief factor in producing malignancy; in support of this view he cites the fact that within the last score of years the number of cases in Great Britain has more than doubled.

Alligatorine.—

This is the latest homœopathic remedy, derived from the adipose of the saurian that inhabits the Southern swamps and bayous.

It is hardly becoming on the part of the regular profession to criticise such a medicament, since it is on a par with a large class that have been foisted upon the profession to pecuniary proprietary ends, and greedily accepted by many.

Detroit College of Medicine.—

This institution at its annual commencement on the 19th instant conferred the medical degree upon eighty-four, and pharmacy degree upon eight, students. The question of lifting this College to complete rank as a university is still being agitated, and active measures in this direction will be speedily taken.

Assyrian Records.—

Layard, in his "History of Nineveh," mentions that the national records of the Assyrian Empire were written on bricks in characters so minute as to be scarcely legible without the aid of a microscope, and that, in fact, a variety of this instrument was found among the excavations.

Cremation.—

Such has been the growth of popular opinion in favor of sudden disposition of the dead by cremation, that there are now, within the limits of the United States alone, twenty-three incorporated societies. During the past decade nearly four thousand cremations have taken place.

Reckless Laparotomy.—

Doctor Walthen quotes Doctor Doleris as saying that eight-tenths of the women upon whom laparotomy or hysterectomy has been performed submitted needlessly to the operation.

If this is so in Paris, what must it be in the United States?

Don't Grow Old.—

An exchange, commenting upon lady physicians, remarks: "A woman is never old enough to neglect her appearance; nothing can be more disagreeable to the sight than a *negligee* old lady."

Is this a libel?

Another Irish Outrage.—

A cause of complaint in Dublin is that English merchants insist upon shipping lobsters to Ireland already boiled. It is well known that our Milesian friends have no use for anything that takes off the green to put on the red.

Artificial Horse Exercise.—

The *Medical Record* states that an ingenious Londoner has invented a machine whereby a person may be given all the motions of a horseback ride, including the trot, gallop or walk, through the aid of a simple adjustment.

Cretinism.—

France has 31,000 cretins; Switzerland 20,000; Austria 13,800; Italy 10,460. The number in the United States is not known, but is variously estimated at between one and two thousand.

A Professional Centenarian.—

Mr. W. Reynold Salmon, M.R.C.S., of Penllwyn Court, Pontfaen, Wales, attained his one hundred and fourth birthday on the 16th ult.

The Harvard Medical School.—

This institution has recently been the recipient of a bequest of $50,000 under the will of the late Reverend Charles Mosley, of Newburyport.

Served Him Right.—

A prominent physician of Chattanooga was recently expelled from the local medical society for publicly endorsing the Keeley cure.

Typhoid from Milk.—

There is stated to be an epidemic of typhoid fever in Mont Clair, N. J., traceable to contaminated milk supplied by a local dealer.

Items and News.

The Milk in the Cocoanut.—

The current issue of the *Pittsburg Medical Review* handles "without gloves" the editor of the *Sanitary Era* for heralding to the editors of the journals a prospectus of some wonderful remedy that the *Era* would editorially soon enlighten us all upon. We are used to this sort of thing in the daily press, but we do not propose to get used to it in the medical press. The *Texas Medical Journal* calls it a mare's nest, and says:

> The editor, in a lengthy and enthusiastic write-up, claims to have discovered that blood will cure anything on earth, except death, and he intimates that he would confidently tackle a mild case of that. Furthermore he says that blood can be preserved alive (*i. e.*, "put up in its own juice," we suppose), notwithstanding the ox or cow be dead long since (and here have we not testimony to—if not the immortality of the soul—at least the immortality of the blood of beasts?) The writer claims that this "preserve" is put up in "a mild but sufficient antiseptic fluid," and under the microscope the corpuscles can be seen alive and kicking; further,—he claims that preserved blood—bottled life he calls it—can now be had at any drug store, and its powers are so wonderful and diversified that it is only necessary to get some of it into the system of the patient, by any manner or means whatever, and no matter what be the trouble or how far gone the patient, when lo! he takes up his bed and walks. The enthusiastic discoverer proposes a "Blood Therapy" or "Hæma-therapy," and says in effect that blood is the only really essential article in his new materia medica! The bug under the chip only crops out when the writer admits that there is a preparation of *ox blood* in the market* (for an account of which see the *Era's* advertising pages), which contains all the essentials of live blood—bottled life. Truly a wonderful discovery!

Soap and Water.—

Some interesting facts about soap were lately given at the London Institute by Professor Vivian Lewes in the course of a dis-

*A proprietary preparation.

course on the "Chemistry of Cleaning." The lecturer stated his opinion that there was nothing better than good bar soap, provided a proper price be paid for it. The manufacturer, being a most accommodating individual, would provide it at almost any price, but it was pretty plain he would not do so at the expense of his own pocket. A similar principle, by the way, is capable of a widespread application in these days of advertising. The learned Professor stated that by the addition of certain chemicals soap can be made hard enough to sell, although it retains fifty per cent. of water; in fact, one man of science had declared that the aim of the average soap-maker was to render water sufficiently stiff to be stamped into tablets. In speaking of the wasteful action of hard water on soap, Professor Lewes mentioned that at Glasgow the new Loch Katrine water supply had saved the city several thousands a year in soap. To this statement he added the amusing remark—"and mind you, Glasgow is not a place where they waste soap."—*Medical Press and Circular.*

Plastic Surgery in Paris.—

A circumstantial story is going the rounds of the public newspapers, which announce a surgical operation under the sensational heading: "Flesh taken from one man's arm to make ears for another." It is said that a Belgian was shut up in a prison cell with another inmate who was in a state bordering upon delirium tremens. The Belgian was furiously attacked by his companion, who eventually bit off both his ears. The victim was taken to the Bicetre Hospital, where he was interviewed later on by the penitent drunkard who had so savagely attacked him. Doctor Landry, who was standing near the bed, asked the latter, "Should you like to give him back his ears?" "Certainly," replied the penitent. "Then," said the Doctor, "let me cut out a couple of small slips of flesh from your arm, and the thing is done." To this the man readily assented, and M. Landry is reported to have thereupon performed a plastic operation with complete success. This story is a good one, and is within the compass of modern surgery, although to the outside world it must savor somewhat of the Baron Munchausen style of anecdote.—*Medical Press and Circular.*

Bromide of Gold and Arsenic.—

Some months ago a physician of this city claimed to have discovered or invented a new solution of bromide of gold and arsenic, and secured wide notoriety, with the aid of injudicious friends. Shortly after, a firm in the East secured a monopoly of its manufacture, and advertised it to the medical world by circulars and pamphlets. The profession is under a great obligation to Mr. Bachmann for the publication of the working formula* for the manufacture of this solution. We believe Mr. Bachmann to be the originator of what may be called its revival, and of course he speaks *ex cathedrâ*. This publication effectually exposes the trade secret which has allowed of a monopoly in manufacture, and puts the preparation within the reach of any skilled pharmacist. The advertised solution is sold for one dollar an ounce. The cost of the ingredients in a gallon of it is less than five dollars, leaving a profit of more than one hundred and twenty dollars on every gallon. —*Pittsburg Medical Review.*

Didn't Need It.—

The following interesting reply was returned to a circular letter soliciting subscriptions to a certain medical journal:

FARIBAULT, MINN., February 22, 1894.

Your copy of the ——— Jurnal come, and the letter to—askin me to send fifty cens and git it fur a yeer. I don't nead no jurnals. When I git a tuff case I go off inter sum secrit plase and tell the lord all about it and wate for him to put inter my minde what ter do. Thats bettern jurnals and syklopedes and such. If we hed more lord trustin docters and less colleges weed fare better. The lord noes morn all the docters and if we go to him fur noledge it ill be bettern jurnals.

Fraternally in the lord,
A CHRISTUN DOCTER.

P. S.—I've practist medisen morn fifty yeers. Yore ken publish this letter if you want ter.

—*Northwestern Lancet.*

Collect Your Faire.—

When a young man appears in your office, Doctaire,
And with a mysterious and diffident aire
Informs you that something is wrong with him whaire—
That is—er—where he—he maketh wataire,
And it hurts till it naturally lifteth his haire,
And he further explains that the whole sad affaire
Came of riding his wheel through a rough thoroughfaire,
Just say to him blandly: "Alas, my dear saire,
In certain precincts, the whole atmosphaire
Seems loaded with microbes—I advise you, bewaire
Of these shady retreats, and do not ride thaire."
Then fix up his "dope" and *collect a good faire*,
For as sure as you trust, though he be a preachaire,
He'll beat you, or skip to some other doctaire.

—*Medical Gleaner.*

A Believer in Darwin.—

A "Glaska" lad came home from school very much excited, and informed his paternal derivative all human beings were descended from apes. He knew it was so, because the schoolmaster had said it. To this

*See our Progress columns.—ED.

the canny father replied: "Ay! that may weel be the case wi' sic fules as yoursel', but it's na sae wi' yer daddy, I maun tell ye."

Only Too True.—

Wobbler was just wiggling out of the tail-end of a protracted jag, and meeting Wibbler exclaimed: "For the Lord's sake, what will cure this drink habit?"

"Trichloride of gold."

"I thought it was bichloride they used," said Wobbler.

"Buy chloride of gold and you will hit it," said Wibbler, "for the other two are chemical impossibilities."—*Medical Gleaner.*

The Czar's Physician.—

Since the death of Professor Botkin, the title of "First Physician in Russia" has been transferred to Professor Zakhärin, of Moscow, upon whom has been conferred the St. Alexander Newski order in acknowledgment of services rendered during his Imperial Majesty's recent illness.

Mortality of Black Death.—

During the year 1346 this dread and much mooted malady carried off 24,000,000 people in Europe, more than 30,000 towns and villages being entirely depopulated. Even as late as 1350, ships were encountered at sea with all the crew dead on board from this cause.

Doctor Thomas Dolan.—

The editor of the *Provincial Medical Journal* has made an incursion into the lighter realms of literature by publishing two one-act plays, entitled respectively "A Confidential Patient" and "The Lady Doctor."

Professor Theodor Puschmann.—

The author of "A History of Medical Education from the Most Remote to the Most Recent Times," now resident in Vienna, is likely to succeed the late Professor Hirsch in the chair of History of Medicine at Berlin.

"Prevention of Cruelty."—

There is much wisdom in Archbishop Tait's instruction to his private secretary: "Tell him he is a consummate ass, but do it very kindly."

A More than Centenarian.—

Pedro Erello died July 12th, 1893, at Tarimors, State of Guanajuato, Mexico, aged 133 years. He left 400 living descendants.

Typhus Epidemic.—

The worst epidemic of typhus ever known occurred in Ireland in 1817–18, resulting in 45,000 deaths out of 800,000 cases.

Book Reviews.

THE CANADIAN MAGAZINE. Price, 25 cents; $2.50 per year. Ontario Publishing Co., Toronto.

The April number opens with a paper upon "Emblems and their Significance," by H. Spencer Howell; Doctor Edward Worthington writes of "Ghosts and 'Things;'" William Ogilvie enters upon a new series supplementary to his former papers describing a trip "Down the Yukon and Up the Mackenzie," entitled "In North-Western Wilds"—every line is of especial interest; Honorable David Mills writes of "The Evolution of Self-Government in the Colonies;" E. C. Grant and Alan Sullivan give excellent views of "Life in the Lumber Woods;" Honorable John Schultz, Lieutenant-Governor of Manitoba, indulges in a bit of almost obsolete history under the title of "A Forgotten Northern Fortress '—referring to Prince of Wales Fort, one of the strongest fortifications ever built in North America, and which for many years was under the command of the famous explorer Samuel Hearne, and located at the outlet of Churchill's Harbor, Hudson's Bay. E. Dowsley enters "A Plea for Ireland;" Fidele H. Holland is the author of an interesting "Story of Nurse Edith;" Frank Yeigh gives a brief but comprehensive biography of "Sir Oliver Mowat;" Doctor Rufus Cyrene Macdonald indulges in an interesting sketch of life in Prince Edward Island three-quarters of a century agone, entitled "Red Alec." The poetry of the number is by Francis H. Turnock, F. M. De la Fosse, O. G. Langford, and J. A. Radford. Arthur J. Stringer in "A Glance at Lampman" writes interestingly of one of the Canadian poets. There is the usual "Gable Ends," "Scientific Notes," and "Book Notices."

LITTELL'S LIVING AGE. Price, $8.00 per year. Littell & Co., Boston, Mass.

The number for April 7th contains: *Prose*—"The Significance of Carbon in the Universe," by Sir Robert Ball, F.R.S.; "The Story of Margredel," Part VII; "Theoprasté Renaudot," by Edith Sellers; "Village Life in France," by a French Official; "Some Notes on Thibet," by A. R. Taylor; "Bird Foraging;" "Cromwell's Veterans in Flanders;" "Market Day in an Italian Country Town;" "The Abduction of a King." *Poetry*—"What Shall I Do?" "A Pure River of Waters of Life;" "The Divine and the Commonplace;" "Then Shall Ye Shout."

April 14th number contains: *Prose*—"Luxury," by Leslie Stephen; "Manette Andrey," Part VIII, by Paul Perret; "An

Antiquary of the Last Century;" "The Story of Margredel," conclusion; "The Shah of Persia in England," by Professor Vambéry; "To and Fro in Lapland," by George Lindesay;" "Earth Movements," by J. Milne; "The Director's Vade Mecum." *Poetry*—"Spring;" "A Protest;" "Leaf from Leaf Christ Knows;" "Earth Hath Clear Call of Daily Bells."

The April 21st number contains: *Prose*—"Fabian Economics," by W. H. Mallock; Part IX of "Manette Andrey;" "Thomas Lovell Beddoes," by Mrs. Crosse; "The Power of Dante," by Moira O'Neill; "An Expedition to Mount Keya," by J. W. Gregory; "Great Cork Forest;" "The Newest about Earth-Worms," by F. E. Beddard; "Egypt Five Thousand Years Ago." *Poetry*—"With the Mind's Eye;" "Our Nan;" "On the Hills;" "A Vain Shadow."

GONORRHŒA AND ITS COMPLICATIONS. By Doctor Ernest Finger. Cloth; 8vo; pp. 330. Price, $3.00. William Wood & Co., New York.

This is a translation of Finger's work on Blenorrhœa of the Sexual Organs and its Complications, and treats of one of the most common diseases with which the general practitioner has to deal, and one, moreover, that is undoubtedly the cause of many anxious hours. The difficulties surrounding the control of the patient during treatment are in a great measure answerable for unfavorable results, yet it must be confessed the physician is often in part to blame. As a matter of fact, there is no one malady in which such unscientific treatment is so generally adopted. Indeed it is only within a few years that definite light has been shed upon the subject, and one of the most important of modern contributions is Doctor Finger's remarkable work, the value and popularity of which is evidenced by the fact it is now in its third enlarged edition. The possibility of more ready culture of the gonococcus, and more precision in mixed infections, constitute important recent achievements which are fully delineated in this volume; the author, moreover, has been able to make the first systematic anatomical examination of chronic urethritis. As a whole, the book is brought up to the ultimate of modern research.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 per year. The J. B. Lippincott Co., Philadelphia.

The complete novel for the May number is "The Autobiography of a Professional Beauty," by Elizabeth Phipps Train; Gilbert Parker's serial story, "The Trespasser," reaches its fifteenth chapter; other stories are "Her Concert," by Dorothy E. Nelson, which records a pathetic incident in the life of a reduced gentlewoman; "The Young Ravens that Call upon Him," by Charles G. D. Roberts; "How I Gained an Income," by "A Bread-Winner;" "Americans Abroad," by Francis B. Loomis; Champion Bissell writes of "Fitz-James O'Brien and His Time;" Anne Hollingsworth Wharton on "Genius at Home;" in "Talks with the Trade," certain "Rudiments" of the literary art and literary business are considered. The poetry of the number is by Kate Jordan, Florence Earle Coates, Mrs. Bloomfield Moore, Harrison S. Morris, and Walter Rogers Furness.

AMERICAN TEXT-BOOK OF THE DISEASES OF CHILDREN. By Doctor Louis Starr. Cloth; 8vo; pp. 1190. Price, $7.00; sheep, $8.00. W. B. Saunders, Philadelphia.

This work is uniform with the American text-books of surgery, medicine, gynæcology, etc., and other publications of this class. It contains a series of original articles contributed by not less than sixty writers, many of them eminent, and all interested in the subjects allotted to them. Every paper is abreast of the times and thoroughly practical. Several chapters embrace at unusual length the eye, ear, nose, throat, and skin, while those more introductory cover fully the important subjects of diet, hygiene, exercise, bathing, and the chemistry of food. Tracheotomy, intubation, and other minor surgical procedures coming within the province of the physician are carefully considered. The individual articles devoted to tuberculosis, rheumatism, tracheotomy and intubation are alone well worth the price of the complete work.

THE MEDICAL ANNUAL, 1894. Cloth; 12mo; pp. 600. Price, $2.75. John Wright & Son, Bristol, Eng., and E. B. Treat, New York.

This is the twelfth issue of this well known volume, which presents to the practitioner in best form for ready reference the advances made in medical knowledge during the year 1893. It contains in the neighborhood of 6,000 references to diseases and their remedies, a complete report of the progress of medicine in all parts of the world, a large number of original articles from the pens of noted American and European authors, and many hints concerning the modern medical and surgical treatment of disease. In short, the book is calculated to bring both the specialist and general practitioner in direct communication with those who are advancing the science of medicine, no matter in what direction, so that they may be furnished with all that is worthy of preservation as reliable aids in their daily work.

DISEASES OF THE EYE. By Henry D. Noyes, A.M., M.D. Cloth; 8vo; pp. 816. Price, $6.00; leather, $7.00. William Wood & Co., New York.

This is the second revised edition of this standard text-book, and presents numerous changes and additions in which the most recent and established views in ophthalmology have been set forth. Of particular advantage in facilitating research is the insertion of reference to authorities. There is, moreover, a very complete and comprehensive table of contents and index. The reputation of the author is sufficient evidence of the practical value of the work. It is profusely illustrated, there being 269 wood engravings, five chromo-lithographs, and ten plates in black and colors.

A MANUAL OF THERAPEUTICS. By A. A. Stevens, A.M., M.D. Cloth; 12mo; pp. 435. W. B. Saunders, Philadelphia.

This manual has been prepared especially for students with the intent that it may serve as an outline of modern therapeutics to be filled in and extended later by a systematic study of larger works. It is certainly a very concise and practical volume, and will be found equally as valuable for reference to the busy practitioner as to the student. Especially commendable is the chapter on "Incompatibility of Prescriptions," and also the elaborate posological table.

ESSENTIALS OF PHYSICS. By Fred. J. Brockway, M.D. Cloth; 12mo; pp. 330. Price, $1.00. W. B. Saunders, Philadelphia.

This is a second and revised edition of Saunders' Quiz Compends, Number 22. As it embodies a series of questions and answers, it affords an excellent means of securing an outline knowledge of the subject treated. It presents a medium between the more complete text-books, such as that of Ganot, and the elementary publications, which are usually lacking in much that is essential to the student.

CLINICAL DIAGNOSIS. By Albert Abrams. Cloth; 12mo; pp. 273. Price, $2.75. E. B. Treat, New York.

The favorable reception accorded to previous editions has induced the author to undertake the revision and enlargement of this work by the addition of many synoptic tables, a chapter on insanity, and a summary on a recent method of diagnosis. The original character of the work has been preserved as an index to, or an abstract of, more pretentious works upon the subject. Its value is simply inestimable.

Therapeutic Brevities.

Pineapple in Diphtheria.—For three or four years I have been hearing of the use of the Pineapple juice for the cure of diphtheria, but thought little of it. Recently, however, it has taken better shape in the report of a case where the child was given up by the doctor, and a friend coming in remarked that he had known children relieved by the Pineapple. The physician in attendance said: "Get it and try it; it can do no harm." A ripe Pineapple was gotten, and the juice expressed and given in teaspoonful doses slowly. It seemed to clear the throat, swallowing was easier, and in a few hours the child was sleeping. Recovery followed.

The Pineapple was used in a number of cases subsequently, with success, in the same neighborhood, and the people think it better than medicines.

Recently they have been making a "Pineapple Digestor" in Southern Florida, and claim for it the virtue of pepsin and more. I took a single dose, and it evidently possessed active properties, for I could feel its effects for twenty-four hours. How it is made I do not know, but it tastes something like a vinegar. If the fruit has this digestive ferment, we will be able to procure it by methods of pharmacy, and bring it into use.*

Associating the two things, one would suppose that probably the benefit in diphtheria was due to a digestive ferment, for pepsin has been used in the treatment of this disease with decided success.—*Eclectic Medical Journal.*

Black Haw in Labor.—Doctor R. L. Hinton, of Prescott, Arkansas, insists that *Viburnum prunifolium* is of exceptional value in the lying-in room. When engaged for confinement cases he requires the patient to take Black Haw in teaspoonful doses three times daily for from four to eight weeks prior to the expected termination of gestation, which, he adds, "renders the labor so easy, natural and rapid" that the child is often born before he arrives. On entering the lying-in room he immediately gives a teaspoonful of Black Haw, declaring "if the labor pains are genuine the natural contraction of the womb will be strengthened, the general system toned, and labor expedited; if the pains are not genuine the patient will be easy in less than ten minutes, and in most cases fall asleep;" and if the case is protracted he gives from a

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* Parke, Davis & Co. manufacture this ferment under the title of Bromelin.—ED.

half-teaspoonful to a teaspoonful every hour. After labor he orders teaspoonful doses every four hours for the first day or two, and three times a day for the next ten days. He concludes with the assertion that ergot is never employed, that he never has post-partum hæmorrhage, and he never hesitates to leave a case as soon as the placenta is delivered. Further, that the remedy "relieves many cases of barrenness, and has a powerful tendency to reduce all pathological conditions of the womb and appendages to a physiological or normal state."

Surgical Treatment of Empyema.—No operation is justifiable unless the presence of pus is certain; unless thorough treatment by medicinal agents, blisters, etc., has failed; or unless the symptoms, dyspnœa, etc., are so urgent as to demand immediate relief. The first operation should consist of simple aspiration, with antiseptic precautions. When the fluid has partially reaccumulated, as it almost certainly will do if purulent, incision and drainage should be practiced. Drainage is best effected by making two openings, one at the lowest point, and carrying a large drainage tube through the cavity from one opening to the other; it should be supplemented by washing out the cavity with mild antiseptic fluids. When the lung has expanded and the discharge has nearly ceased, the tube should be shortened, the upper opening being allowed to heal, and the tube then being gradually withdrawn through the lower opening. When the lung is so bound down by adhesions that it cannot expand, resection of two or more ribs should be practiced, in order to allow collapse of the chest wall and to promote healing by bringing the costal and visceral layers of the pleura into contact. The more extensive operations of Schede and Tillmans are not to be recommended for general employment.—Doctor John Ashhurst, Jr.

Bismuth Preparations in Indigestion.—The editor of the *American Therapist* declares [and we cordially endorse the same.—Ed.] that after having given subgallate of bismuth (sometimes called Dermatol) careful test during several months, the results were no more satisfactory than those obtained from equal doses of bismuth subcarbonate. Bismuth subcarbonate, moreover, is superior to bismuth subnitrate, since the former is an amorphous powder and the latter is a crystalline substance. He recommends as a marked improvement over the use of bismuth alone in the treatment of dyspepsia and indigestion, powders or tablets which contain one-quarter grain extract nux vomica, one grain pure pepsin, and four grains bismuth subcarbonate. This formula will be found available when the fault is found to be with the stomach, but when intestinal indigestion is deficient the following is recommended two hours after meals: extract of nux vomica one-quarter grain; pancreatin, one and a half grains; subcarbonate of bismuth, three and a half grains.

Danger of Hypodermatic Injection of Morphia.—Doctor F. W. Campbell related the case of an old lady, subject to attacks of pleurodynia, for which he was in the habit of prescribing minute doses of opium. In his absence she was seized with severe pain, and a neighboring practitioner gave her a hypodermatic of morphia, when she went to sleep so profoundly that her friends were alarmed. Next day she was found to be suffering from complete paralysis of the bronchial tubes, and the phlegm went on accumulating until she died shortly afterwards. The relief of pain is not the only object to be considered when suddenly called to a patient, and a hypodermatic needle may be a two-edged sword, especially when used on the aged.—*Montreal Medical Journal.*

Atropine in Morphine Poisoning.—Cruse (*Archiv für Kinderheilk.*) describes the case of an infant a week old accidentally poisoned by a grain of morphine. Eventually he administered Atropine solution, giving one-quarter of a grain on two successive occasions at an interval of half an hour. Recovery immediately ensued, and was complete in thirty-six hours, other suitable treatment being also employed. He calls attention to the relatively large doses which were administered without causing unpleasant symptoms.

Ergot in Labor.—Ergot is a true oxytocic by virtue of its unaided power exercised on the uterine centre of the medulla spinalis, whereby the gravid uterus is excited to contract on its contents. In all cases of hæmorrhage from the non-gravid relaxed uterus, it in suitable doses compels firm, persistent contraction. In view of these two facts, its employment as a *safeguard* after delivery of the placenta is conservative, practical, and devoid of danger.—Doctor R. B. McCall, in *American Medico-Surgical Bulletin.*

Thyroid Extract in Sporadic Cretinism.—Mr. Lunn showed at the Medical Society of London a cretin, aged twenty-six, who had been under his treatment seven months. She

was put on the Thyroid treatment both by the mouth and by injection, the improvement ensuing being most remarkable. The patient had become relatively very intelligent. Previously amenorrhœic, the catamenia had commenced soon after the institution of the treatment.—*The Practitioner.*

Spina Bifida.—Doctor John Roberts is convinced that in selected cases, excision is justifiable and will relieve the patient from this congenital defect The injection of the sac is unscientific, because it is groping in the dark. He deems excision proper even in children but a few weeks or months old. Herrick reports successful excision in a child six weeks old, in which the stitches were removed on the seventh day, leaving firm union, with no return of the tumor.

New Treatment for Glaucoma.—Kniess succeeded in checking glaucomatous accidents by making a circular incision in the cornea and including the iris in it. This irido-sclerotomy proves useful, especially in severe forms of glaucoma. Hernia of the iris, always to be dreaded in ordinary sclerotomy, is thus avoided. This operation may be recommended in all cases where iridectomy would have been deemed necessary.—*Southern Clinic.*

Wild Yam.—Doctor A. E. Bacon writes the *Medical World* that *Dioscorea villosa* is undoubtedly as much a specific in bilious colic as is quinine in intermittent fevers. The dose of solid extract is from one to four grains given every one to four hours according to urgency; of the fluid extract, from one-half to one drachm. It is also useful in flatulence, in cramps of the stomach, and in spasmodic condition of the bowels.

Nitro-Glycerin in Sciatica.—Doctor Lawrence, after trying a multitude of drugs to relieve a case of sciatica in a carpenter, aged forty-two, who was also a morphine *habitué*, gave him a 1-to-100 solution of Nitro-glycerin, one drop three times a day, gradually increasing the dose to five drops. Relief was almost immediate, and in ten days he resumed work, completely cured.—*Revista de Ciencias Medicas de Barcelona.*

Lilac for Malaria.—Doctor Valerius Idleson, of Berne, Switzerland, recommends the use of an infusion of Lilac (six fresh leaves of the plant to a cupful of hot water) for malarial and intermittent fevers. Two cupfuls of the infusion should be taken daily until the attacks disappear; after that, one cupful daily for a few days.—*St. Louis Medical and Surgical Journal.*

Simple Remedies for Constipation.—A tart apple eaten on rising and followed by a glass of cold water, with a regular time for morning stool, preferably within one hour after the morning meal—oftentimes a simple glass of cold water, to which is added a pinch of sodium chloride, five grains or less, drank before breakfast—will produce the desired effect.

Quinine in Obstetrics.—Quinine strengthens the pains, renders them longer, prevents after-hæmorrhage, and controls after-pain. I have never but once given anything but Quinine muriate to control the after-pain, have never had post-partum hæmorrhage in any case, and but one case of puerperal fever.—Doctor John E. Kilburn, in *Medical World.*

Operations for Strabismus.—Doctor Edward Jackson declares no operation should be performed so long as other methods offer any probable chance of relief. Also that no operation should be performed before the child is five or six years of age, and even then it should rarely be attempted to completely correct the deformity.

Pichi.—Fabiana imbricata has proved a most valuable remedy in general vesical and genito-urinary troubles. It is diuretic; favors the expulsion of calculi and gravel, and relieves the irritation caused thereby; modifies favorably purulent discharges; and acts as a general stimulant of the excretory functions. —*Medical Summary.*

Nocturnal Emissions.—When due to atony or irritation, from ten to fifteen drops of Normal Liquid Hyoscyamus at bedtime will produce excellent results.—*Chicago Medical Times.*

Thuja Occidentalis. — Doctor Charles L. Dana declares five drops every three hours of Arbor Vitæ relieves the most severe case of cystitis.

Scarlet Fever.—Doctor John Tiffany advises the use of *Echinacea angustifolia* in this disease, declaring it is attended with the happiest results.

Eczema of Vulva or Scrotum.—Menthol is said to be almost a specific for these maladies.

Medical Progress.

COMPOUND SOLUTION BROMIDE OF GOLD AND ARSENIC.—"Arseno-Auro," the so-called new remedy, lately so much lauded as a cure for many of the diseases which flesh is heir to, especially those of nervous origin, has been prepared by the writer in the following manner:

To make gold bromide, dissolve 83.2 grains of metallic gold, 24 carat fine, in two ounces of a mixture of nitric acid one part, hydrochloric acid three parts; after perfect solution has taken place, evaporate to dryness—the so-formed salt is auric chloride. This is re-dissolved in four ounces of distilled water, and 140 grains of bromide of ammonium dissolved in two ounces of distilled water are slowly added; this forms, by fermentation, bromide of gold and chloride of ammonium. This solution of the two salts is then repeatedly agitated with ether until the aqueous layer is decolorized. Then carefully separate the ethereal layer, which contains the bromide of gold, by means of a separating funnel; after so doing agitate the ethereal solution with fused calcium chloride to remove all traces of water. Then drive off the ether by the action of heat. Pure bromide of gold remains. Dissolve this in sixteen ounces of water and set aside for further use.

Dissolve 195 grains arsenious acid in sixteen ounces of water, by boiling for one hour; let the solution cool, and then add four drachms of bromine. Let stand for twenty-four hours, and then drive off the excess of bromine by boiling the solution until clear.

Mix this solution with the solution of bromide of gold, and add water enough to make 128 ounces, or one gallon. *Employ nothing but glass or china utensils.* The solution is of a clear red wine color, slight odor and slightly acid, styptic, metallic taste; readily miscible with water, alcohol, and glycerin; it is incompatible with alkalies, alkaline carbonates, metallic salts and alkaloids, and contains, in aqueous solution, auric tribromide, hydrobromic acid, and oxybromide of arsenic (not tribromide of arsenic, as erroneously stated on the labels of the proprietary preparations). At first the solution also contained chloride of ammonium, and as this was thought to rather aid its action, being a mild hepatic stimulant, no pains were taken to remove it. Now it is removed by the use of ether as above stated. The solution keeps well and remains unaffected by ordinary diffused light, but under concentrated light or sunlight may decompose, as most bromides do. The dose is five to ten drops, diluted, three times a day. Ten drops contain $\frac{1}{33}$ grain of tribromide of gold and $\frac{1}{16}$ grain of oxybromide of arsenic.

This somewhat ancient remedy was again brought to notice in the early part of 1893. It was at that time prepared by the writer according to the above formula, which has been until now private. With the writer's permission it was used by some local physicians until October of that year. Since then different solutions under different names and by different inventors (?) have entered the market, and it is therefore deemed advisable to publish the formula for the benefit of an honest and honorable profession.—CARL F. BACHMAN, JR., Ph.G., in *Pittsburg Medical Review.*

THE VENOM OF CLEOPATRA'S ASP (NAJA HAJE).—Graziani (*Riforma Medica*) undertook a physiological study of the venom, which, when dried, appears as transparent scales, easily soluble in water, very slightly so in alcohol, ether, or chloroform; the aqueous solution has an unpleasant odor, and is neutral to test-paper. Chemically it gives all the tests of the venom of *Naja tripudians.* To the guinea-pig, rabbit, or frog, it is fatal in extremely minute doses. The first, a few seconds after injection, becomes paralyzed in its hind limbs, foams at the mouth, and makes violent attempts at vomiting; the eyes are half closed, but occasionally for short periods there is a partial disappearance of the paralysis, and the animal makes feeble attempts to support itself; respiratory embarrassment soon succeeds, and the animal lies perfectly prone, devoting all its attention to breathing, which is rendered still more difficult by vomiting and the frothy saliva that is secreted in abundance; finally death ensues from asphyxia. The post-mortem examination reveals the heart still feebly beating, the lungs pallid, and the blood in the organs very dark; the liver and kidneys hyperæmic; the brain and cord, with coverings, anæmic.

In the rabbit the course of poisoning is practically identical, but, histologically, the following facts are made out in addition: The red blood-corpuscles are in great measure broken down, and there are also effusions into the muscular tissues; the kidneys are very hyperæmic, and there is marked degeneration of the epithelium lining the glomeruli and convoluted tubules; the glomerular capsules are much distended, and numerous leucocytes are discernible throughout the organ; the liver also is hyperæmic, and shows numerous broken down blood-corpuscles, and partial necrosis of many of the liver cells.

Examination of the central nervous system reveals no particular changes.

With regard to the nature of the venom, Graziani suspects it to be an albumose.

ANIMAL EXTRACTS.—With our present knowledge of organic chemistry, the attempt to introduce animal extracts as therapeutic agents seems an insult to the intelligence of the profession.

All physicians know that the circulation of poorly digested chyle is productive of all sorts of nervous manifestations and greatly overtaxes the eliminating organs.

And what can be said of the animal extracts? They have not been digested; are, therefore, foreign bodies, and, moreover, often possess toxic properties.

In phthisis, the hectic is superinduced by the absorption of ptomaines from the alimentary tract, and doubtless the *reaction* following the exhibition of the animal extracts is due to a similar cause. Men frequently mistake the roused appearance of the system, when poisons are ingested, for added strength, and six feet of green sod conveniently covers the mistake.

No one really believes in animal extracts, not even their sponsors, but this is an age of discovery and experiment, and some have not hesitated to make truth and honesty subservient to the mercenary instincts of the commercial sense.—*Medical Brief.*

EXAMINATION OF THE FEMALE BLADDER.—Doctor A. H. Kelly, of Johns Hopkins University, formulates a new method of examining the female bladder, permitting also of catheterization of the ureters. The urethra is dilated gradually to ten, twelve, or fifteen millimeters, as the case may be, the urine drawn off, and a speculum introduced to correspond in size to that of the last dilator employed. The patient's hips are elevated, when the bladder becomes distended by air-pressure exactly as does the vagina in the Sims method. With a head-mirror and light, every portion of the bladder may be inspected in turn by merely changing the direction of the speculum. By elevating the outside end and carrying the speculum to either side, the mouth of the ureter of the opposite side is brought into view, when it easily permits of the introduction of a small, long catheter. The orifices of the ureters appear as pits, or slits, or semilunar folds, with their convexity outward.

MENSTRUAL PAIN.—Doctor Betton Massey says menstrual pain is incorrectly supposed to be due to obstruction to the menstrual flow. But no obstruction exists in the majority of cases, and certain cases of obstruction (hæmatometra) have been found to exist without menstrual pain. The term "dysmenorrhœa," which suggests a physical difficulty (rarely present), should be replaced by the term "menorrhalgia," which describes the chief symptom of the affection.

Menorrhalgia is a painful neurosis displayed by the utero-ovarian nerve filaments and centres at the menstrual periods; and the exciting causes are: lack of development, endometritis, metritis, ovarian congestion or inflammation, tubal or peri-uterine inflammation; and the predisposing cause essential to its development is a disturbance in the trophic processes in the local or general nervous system.

STOMACH AND CARDIAC TROUBLE PRODUCED BY THE HABITUAL POSTURE OF SCHOOL CHILDREN.—Doctor Motais, of Angiers, points out that the habitual posture of school children is an important cause of myopia and of spinal curvature; it is also a cause of dyspepsia, because the bending forward causes constriction of the stomach. The faulty position impairs the current of blood through the vessels of the neck, and the result is cardiac palpitation. Most cardiac and stomach troubles in students and clerks can be made to disappear by correcting the faulty posture.

FUNCTIONS OF OVARIES AND TESTICLES.—It is a well known fact that the ovaries and testicles have at least three distinct actions: First, generation: Second, action through absorption on the central nervous system, which gives to men and women their physical, moral, and intellectual characteristics: Third, a special tonic action which reinforces in a special way the action of the spinal cord and brain. These cannot be disputed.—*Dominion Medical Monthly.*

CALCIFIED PLATES FROM THE PLEURA IN EMPYEMA.—Doctor Adami found calcareous plates in the pleural cavity after resection of the fifth and sixth ribs. These looked like exfoliations of bone, but proved on examination to be merely deposits of calcareous salts in the thickened pleura following empyema. —*Montreal Medical Journal.*

Publisher's Department.

Doctor Gordillon, St. Amand, France, says: "I have tried Aletris Cordial in a case of dysmenorrhœa. The result I obtained from the use of the preparation was excellent—far better than I had obtained in the same patient by prescribing the usual remedies employed in such cases."

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Indignant Father: You should be ashamed to talk so to your sister.

Tommy: We were only playing papa and mamma, and she said she needed money for a new hat, so I talked to her like you do to mamma when she asks you for money.—*St. Louis Humorist.*

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From C. H. Mastin, M.D., the most prominent surgeon in the South:

Dios Chemical Co., St. Louis, Mo.

MOBILE, Ala., Feb. 20, 1894.

GENTLEMEN:—The Sennine which you sent me is a good combination for dry dressings. It is put up in a convenient form, and I shall continue to use it to advantage.

***

"I so much like that sentiment: 'Our life is rounded with a sleep.'"

Jackson (sighing): I'd like to be sure that it will be squared with the awakening.—*Puck.*

***

Ringworm.—Mr. Jonathan Hutchinson recommends, very strongly, chrysophanie acid in the treatment of ringworm, using the following formula:

℞ Acid. chrysophan., 3 j.
Hydr. amm. chlor., gr. xx.
Lanolin, 3 j.
Adip. benzoat., 3 vj.
Liq. carb. deterg., ♏ x.

M. Ft. ung.

***

ROMANCE GONE.

Hills: Why is it that they always have bachelors respond to the toast, "Woman, lovely woman?"

Hulls: Married men know better.—*Truth.*

***

Fermentative Dyspepsia.—For this form of dyspepsia Professor Austin Flint prescribes bismuth subgallate, in ten-grain doses, either in capsules or tablets, three times daily after eating. If constipation exists, he recommends the use of Villacabras water, giving before breakfast enough to produce two or three evacuations; for two or three days after, a daily movement follows. The water may then be repeated, if necessary.—*Brooklyn Medical Journal.*

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Doctor Orazio Satariano, Barrafranca, Italy, says: "Although opposed to the use of pharmaceutical specialties, I was struck with the formula of Bromidia (Battle), and, knowing the action of its ingredients, could not bring myself to believe in its possessing greater therapeutic power than its component parts. However, I determined to try it in a severe case of mammary neuralgia, which had proved refractory to an infinitude of other remedies. The result was brilliant, and far beyond my expectations. I then made experiments with a preparation made according to the formula of Bromidia, by an experienced pharmacist, but whether due to the greater purity of drugs used, or special mode of combining, the results were not to be compared with those of Bromidia (Battle)."

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"Have you anything to say before we eat you?" said the King of the Cannibal Isles to a missionary. "I have," was the reply; "I want to talk to you on the advantages of a vegetable diet."—*Canadian Druggist.*

***

T. D. Finck, M. D., Kentucky School of Medicine, Louisville, says:

"I am convinced there is no remedy so useful and attended with such satisfactory results in the treatment of melancholia with vaso-motor disturbances, anæmic headaches, emotional distress and active delusions of apprehension and distrust, as Antikamnia. It also increases the appetite and arterial tension, as well as being particularly serviceable in relieving the persistent headache which accompanies nervous asthenia.

"As an antiseptic and antipyretic and antiperiodic, it is good, nothing better. It is especially beneficial in spasmodic asthenia, in hay fever, in whooping-cough, in headaches, particularly of the nervous variety, also that from disorders of the digestive organs, or from the various neuroses.

"In mild hysteroid affections, in the various neuralgias, particularly ovarian, in the nervous tremor so often seen in confirmed drunkards, also in delirium tremens, it is of particular service.

"The pain of locomotor ataxia yields to treatment with Antikamnia in a remarkable degree, its analgesic power being of a peculiar kind, in that it will relieve painful affections due to pathological conditions of the peripheral nerves, as neuritis, etc.; also lumbago, sciatica, and myalgia.

"When pain is the prominent symptom, it is a desideratum, as its province is relief of pain in any and every form. And best of all, there is no danger of morphinism, no nausea nor malaise so common with opium and its preparations."—*Cincinnati Lancet-Clinic.*

The Medical Age.

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Original Articles.

COMPARATIVE VALUES OF THE PRINCIPAL APPARATUS EMPLOYED IN TREATMENT OF FRACTURES OF THE THIGH.

BY DOCTOR G. ARCHIE STOCKWELL.

There was a time—not so very long since, either—when surgery resolved itself into an inquisitorial tribunal. It was not enough that the individual should be seized upon and made to suffer by disease or accident, but the medical attendant must double the sufferings of the unfortunate: "And the last state of that man was worse than the first," could appropriately be remarked. Those days of added torments even yet are not entirely done away with, though vast improvements have been made; hence it is a reasonable and just demand for the future, that the ill and suffering should be secured the utmost possible ease and comfort.

The multiplicity of appliances which have been used in treating fractures of the femur, indicates the difficulties that have been encountered in securing perfect results. Cooper Forster remarks:* "If an adult fracture his thigh, it is all but certain that there will be shortening of an inch!"—a statement not at all encouraging to either practitioner or patient.

It appears there are four forms of apparatus in general use, each of which possesses its own particular advocates. Doctor Cowling and others recommend the plaster-of-Paris splint or bandage; Doctor Frank Hastings Hamilton favors the use of extension in the straight position by the weight-and-pulley apparatus, in connection with a long straight splint extending from the axilla down along the outer side of the lower extremity to the sole of the foot; Doctor Bauer advocates the use of the double-incline plane; and Doctor Hodgen advances special claims for the superiority of a suspension splint.

There are many modifications of these four forms of treatment, but the outline given is sufficient for all practical purposes—there is, for instance, some difference between Liston's and Frank Hamilton's method, yet the application is in general the same.

Some of the objections to the *primary* employment of the plaster-of-Paris splint or bandage are: That simple fractures are always attended with more or less tumefaction, and in case of a broken thigh it is obvious that when the swelling goes down the bandage will be rendered loose, with consequent liability to displacement at the point of fracture; that the plaster-of-Paris and similar splints have been repeatedly scored and condemned on account of danger of strangulation of the tissues, because of induced gangrene from too tight bandaging in fact—the latter a most grave possibility in the hands of those not specially expert; again, the splint is apt to become soiled by urine and fæces, which no amount of ingenuity can prevent; is inapplicable to treatment of compound fractures; and, accepting the dictum of Hamilton, specially objectionable because it permits of neither extension or counter-extension—Hamilton adds: "While the plaster method was in use in Bellevue Hospital I saw more crooked and shortened legs than were ever in this Institution before."

The modifications of Desault's splint, each and every one of which combines the weight and pulley, are most esteemed because all are the result of an attempt to secure extension and counter-extension. Primarily extension was attempted through the foot and leg by means of bands and gaiters to which cords and weights were attached, but as excoriation and sloughing was a too frequent result these latterly gave way to adhesive straps. The same unpleasant consequences commonly attend the practice of securing counter-extension by the perineal

* In Guy's Hospital Reports for 1875.

band, for which has been substituted a method whereby the weight of the body is utilized, merely by propping up the foot of the bed. Both constitute instruments of torture, and may readily be abandoned with the result of greatly increased comfort to patients.

Hamilton employs a long straight splint extending from the axilla to the foot—"first, to prevent eversion, and second, to prevent bending outward at the point of fracture;" and to give support and to produce immobility of the fractured bone he encases the thigh in splints of heavy felt.

He moreover attributes shortening chiefly to the obliquity of the fracture, and to the action of the powerful muscles of the thigh. And it would seem that altogether too much stress has been, and still is, laid upon the latter, though Bauer rushes to the other extreme and rejects it *in toto* as a cause of shortening, adding that in properly managed fractures extension can be discarded altogether; he says:

It is a surgical fact that at the moment of fracture the involved groups of muscles contract and thus give rise to displacement, deformity and undue immobility at the place of injury, but with proper coaptation the muscular agitation subsides and does not return except for special cause, as, for instance, displacement and irritation of the muscles and nerves by the short point of the fragments. Again, if continuous muscular contraction is the recognized pathological law in fracture of the thigh bone, it should be equally manifest in fracture at other localities of the skeleton. In fracture of the humerus, extension by mere weight of the forearm is often more than can be endured by the patient, hence requires support in order to keep the fragments in contact. In referring to the last point Doctor Hodgens declares "muscles will become separated under trifling weight, as in the case of a man trying to hold a small weight out at arm's length;" just so in extension applied to the foot. An extending force of one pound continuously applied will more perfectly overcome the muscular action than five hundred pounds acting for a brief period.

As to spasmodic contraction of the muscles of the thigh which might result from mechanical irritation at the point of fracture, he asserts:

The strong muscles of the thigh cannot be controlled by any such insignificant weight as fifteen or twenty pounds—the heaviest weights employed by Hamilton for the purpose of extension.

A heavier weight than twenty pounds cannot be used with safety, for fear of rupturing the ligaments of the knee, especially those posterior. Doctor Bauer in giving utterance to the expression "otherwise properly managed fractures," while rejecting the theory of muscular contractility as a cause of shortening, probably excepts partial flexure of the thigh upon the body and of the leg upon the thigh, as this position he afterwards recommends, a position whereby the contractility of the muscle is reduced to a minimum. Physiologists affirm that there is a certain amount of tonic contraction of the muscles at all times, though Doctor Bauer seems to hold the muscles of a fractured limb have necessarily lost such contractility. Further, there are elastic among other tissues of the thigh, and it is reasonable to suppose that slight extension force would tend to counteract their influence and to keep the parts of the fractured bone in more perfect apposition.

The objections to Hamilton's method are: The position is unnecessarily uncomfortable; and it is not conducive to the best results as regards shortening and deformity. As to the first point, no one even in health will keep a limb extended with a view to personal comfort; whether sleeping or waking it is natural to seek the ease and rest afforded by partial flexion. Hamilton straightens the leg and keeps it in this condition for weeks for the purpose of securing the extension by means of weights—a procedure that is unnecessarily uncomfortable and torturing, and moreover renders some of the muscles tense and readily causes them to tire.

By the suspension splint sufficient extension is secured with the limb flexed in an easy and natural position, consequently it may be reaffirmed that Hamilton's method is not only objectionable but unwarranted. Again, it is stated that fractures of the femur are mostly oblique and occur most frequently at the junction of the third and upper fourth of the shaft. In Hamilton's straight position the short portions of the fractured bone would thus be specially liable to displacement, owing to the fact the soleus and iliacus, by being made tense, tend to draw the superior portion

of the fractured bone upward and outward, while the gastrocnemius muscle, also tense, exerts a downward and backward force upon the lower portion of the bone. By flexing the limb the undesirable action of these muscles is partially or entirely overcome, and the fractured ends of the bone are retained in the best condition possible to promote healthy and natural union.

The latest improvement in the double-incline splint is that of Bauer, which gives the patient far more comfort than can be had by placing the limb in the straight position. There are serious objections, however: The splint is top-heavy; it rests upon the mattress of the bed so that the limb is in a measure immovable, and also in such a way that the movements of the trunk are liable to be communicated to the upper fragment of the femur to the exclusion of the lower, and a constant disturbance at the seat of fracture the natural result. There is no extension, and almost every surgeon holds that a certain amount is essential to best results; doubtless this very lack is the cause of some of the evils which have led numerous practitioners to condemn this form of apparatus.

Doctor Nathan R. Smith invented the first suspension splint (Fig. 1), to which he give the

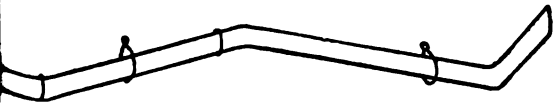

FIG. 1.

adjectival title of "anterior" from its position when in place upon the limb. This is simple in construction; made of two one-quarter-inch wire rods sufficiently long to extend over the full length of the leg, placed parallel to each other and fastened together at four or five points by transverse bars, keeping the sides two and a half or three inches apart. It can be bent to secure any degree of flexion desired, and is applied over the anterior surface, being fastened to the leg by four or five bands; the whole is then suspended from the ceiling and the entire apparatus covered with bandage (Fig. 2). Hodgen's modification embodied widening of the splint throughout its length—thereby increasing its space between the parallel sides. He also worked out some individual details which are not necessary to enter into in this connection, since they embody in part the methods which will next be considered.

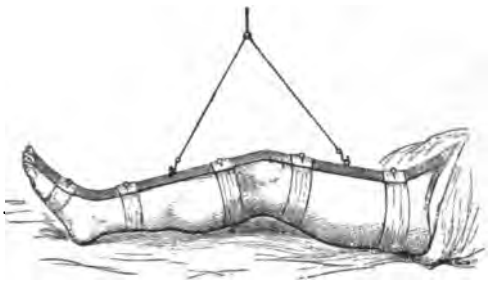

FIG. 2.—(After Erichsen).

Doctor C. M. Stockwell, of Port Huron, Mich., began the use of the Smith anterior splint in the early sixties, and partly at the suggestion of the late Professor Moses Gunn, and partly as the result of experience, introduced modifications that materially enhanced its value. Chief of these were the enlargement of the splint both longitudinally and laterally, and giving it a flare at the upper portion in proportion to the lateral diameter of the thigh—in other words, the lateral contour of the splint was proportionate to the contour of the leg which was to be treated. This splint, to answer the best purposes, should really be a trifle wider than the leg to be treated—wider at the thigh than at the foot—and long enough to reach from the anterior superior spinous process of the ilium to three or four inches beyond the toes (Fig. 3). It with the limb is swung, by means of

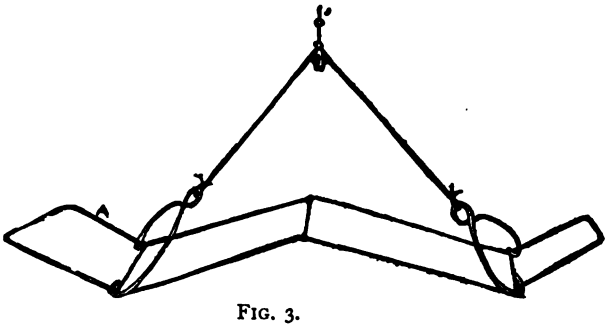

FIG. 3.

hooks, pulleys and a stout cord, to a hook in the ceiling, or to a framework attached to and over the bed (Fig. 4). The splint should be constructed from the stoutest steel wire, three-sixteenths of an inch in diameter, and

braced at least at three points in its length—once near the knee, once at the groin, and once at the ankle; the hooks to suspend it are also

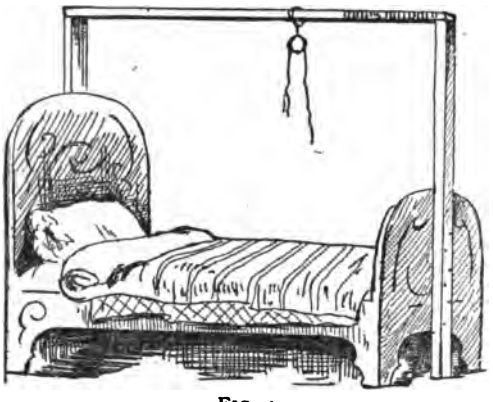

FIG. 4.

made of steel and wire (Figs 5 and 6), embodying a stout spring to prevent slipping; one of these hooks is hooked behind the

FIG. 5.

FIG. 6.

brace over the groin, the other in front of that at the ankle (see Fig. 3), and both are connected by a cord, which in its centre (by a loop that will permit it to run free) is attached to the cord suspended from a pulley attached to a hook in the ceiling, or framework before mentioned. This second cord passes through a hole in a bit of board (fitting snugly), and after going over the pulley returns again to this board or block, and passes through it downwards, and again upwards, which prevents slipping (Fig. 7).

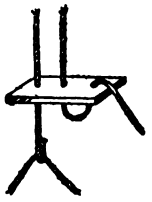

FIG. 7.

In applying, strips of bandage of proper length are slipped under the injured limb, side by side, from the heel to the upper portion of the thigh—the injured limb is permitted to rest upon a mattress until these are adjusted; the ends of these bandages are next folded over each side of the splint and fastened back upon the ascending portion by one, two or three safety-pins, as may be required by the width of the strip and to keep the whole smooth against the leg. Now the hooks are adjusted and the limb hoisted free from the bed (Fig. 8). Once the limb is

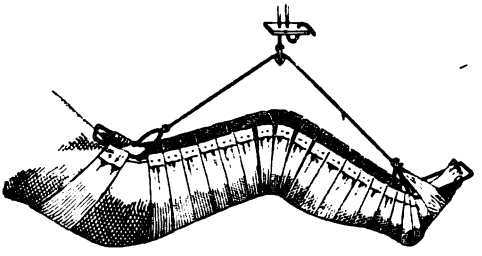

FIG. 8.

up, any adjustment necessary to secure comfort, or to secure exact approximation of the fractured ends of the bone, can be made. This leaves the limb in a cradle, as it were, whereby it is constantly under the eye, and there is no need for other splints or bandages.

If the splint is bent sufficiently at the knee, there will be little if any shortening of the limb—the weight of the leg and the contra-weight of the body are ample for all purposes of extension. I should have mentioned, also, that to steady the apparatus a broad bandage encircles the hips, and that a bandage or gaiter may be employed to support the sole of the foot, it being fastened to the lower suspension hook. The especial advantages of this splint are:

The seat of the fracture is always under the eye:

Any change or readjustment is accomplished simply by relaxing or tightening one or more strips of bandage:

No trouble from swelling or erosions:

Comfort to the patient, who is able to move about the bed, or to sit on a chamber or bed-pan:

The injured limb is immovable save at the hip-joint:

The patient may himself elevate or lower the leg, regulating the position to meet the demands of comfort.—The greatest trouble arises (at times), especially in cold weather, from difficulty in keeping the limb warm, but folded flannels may be laid within the cradle on the leg, and the bed-clothing arranged to

cover the limb like a tent by suspending from the cord that supports the splint:

It is especially advantageous for employment in compound fracture, as the wound can be readily dressed by dropping the end of one or more bandages for the purpose:

The leg is free from any compressing bandage, so that nutrition and repair are not impeded:

Absence of perineal bands or other appliances which may produce excoriation or sloughing, is an advantage hardly to be measured:

Coolness of every part of the limb in the hottest weather:

Freedom of motion, allowing the patient to sit up or move to any part of the bed without disturbing the fracture or inducing the least pain:

Apposition of the fragments, which can never be disturbed owing to the fact there is no resistance offered to the movement of the limb in any direction in which the body may be moved except in the direction from the point of suspension; the movements of the limb following the movements of the body without the least friction:

It admits of a great number of modifications, is easily bent to any position of the limb desired, and exceedingly simple in construction:

Its construction is within the scope and power of any one with the aid of a village smith—a worker in iron or tin.

I do not know what I would have done, in one notable case, but for this device. The case was one of compound comminuted oblique fracture of the femur above the condyles—two inches of the bone ground to fragments, and the condyles split apart; there were also two large wounds, either the size of a silver dollar, on the interior posterior aspect of the thigh. In this case the anterior splint saved the man from an amputation, and gave him a leg every way serviceable except the shortening—the only case of shortening I ever had from this splint; shortening only amounted to one and one-fourth inches.

It is advisable usually to bend the splint at much more acute angles than are represented in Figs. 3 and 8, placing the leg in much the same position as is customary with a double-incline posterior splint.

In 1888 my brother and self applied two of these splints in a case of fracture of both legs, and it was a matter of considerable surprise to the friends and others, how that, both limbs being suspended, the patient could indulge in so great movement about the bed without detriment or pain.

In another case of oblique fracture of the leg, in which both bones were involved, within a week after the application of the splint the patient would get out from the bed and stand on the floor with his sound leg, the injured one swinging from the hook in the ceiling; as before remarked, once in this splint the limb is immovable except at the thigh joint.

Within a few weeks the same splint was applied in the case of a fracture of the leg occurring to a prominent attorney in Detroit, by myself and Doctor James Samson, of Windsor. In this as in all cases, great comfort was given the patient, who was able to sit up and move himself from side to side in the bed; and he likewise on several occasions stood upon the floor with the sound leg. This was a case of compound fracture, and the apparatus facilitated the dressing of the wound, which was a very ugly one. With any other apparatus the patient would at least have lost the limb, and perhaps also his life.

Finally, the anterior splint, like the other forms of apparatus mentioned, must be judged by the comfort it permits, and the results that accrue. Any real disadvantage in its use as compared with other forms of apparatus has yet to be made apparent, hence it is fair to suppose there are none.

Doctor J. Tarrant Fry gives the statistics of seventeen unselected cases of fracture of the shaft of the femur as treated in Guy's Hospital in connection with the long outside splint — the apparatus especially recommended by Hamilton, and the one which appears to be in the most general use at the present time. The average amount of shortening in these seventeen cases was *more than an inch*, and in *no* case was there absence of shortening.

Out of seventeen cases, also unselected, treated by the same individual with the suspension splint (Hodgen's modification), the average amount of shortening was less than

half an inch; in six cases there was no shortening.

After this comparison Fry enumerates three especial advantages which in his opinion appertain to Hodgen's splint over all others: Less shortening of the limb; greater comfort to the patient; less liability to bed-sores in aged people.

Dr. Hodgen, in speaking of his method of treating the thigh, remarks:

In every case coming under my care in the last eight years I have never had a bad result, and never a case of ununited fracture, and never a case in which union was delayed beyond ten weeks. . . . . The cases treated represent nearly every kind of fracture of the femur, including fracture of the neck and condyle.

From this review of the appliances for fracture of the femur, I think we have good reason to believe that the suspension splint is preferable to all others as giving not alone the best results, but the greatest amount of comfort, whether it be Hodgen's or the modification thereof used by my father, brother, and myself.

A word in regard to other fractures of the lower extremity. In fracture of the bones of the leg the suspension splint is of great benefit. The movable fracture-box has always been a barbarous institution, and the wonder is that it was ever tolerated. It is a lumbering, uncomfortable piece of mechanism, and seems to have been designed more as an instrument of torture than for any beneficent purpose. It keeps the lower fragments of the bones immovable while the upper are influenced by the motions of the body. The gastrocnemius muscle is constantly held tense, owing to the straight position of the leg in the box, and many ill results, such as crooked and shortened bones, may be attributed to this device. The plaster-of-Paris bandage is nearly as objectionable.

For the alleviation of suffering, and for the increase of comfort to unfortunate humanity, I believe the suspension splint must be admitted as superior; I doubt not, however, there is great room for improvement even in this device.

Before closing, I will mention another device employed by my father and self in the case of a man with fracture of both thigh and leg of the same side, the anterior portion of the limb (with spots on the sides) being also terribly scalded. We had constructed a double-inclined plane, as it were, in tin, simulating the bandages of the anterior splint, but with openings along the sides where it was necessary to dress burns that could not be reached from above. The edges of this splint were of stout steel wire, each bent down at the ends and joined to make a broad foot so as to prevent lateral tipping. It was only in the one case that we ever found occasion to employ this device, and under such exceptional circumstances that I doubt if my readers will ever require anything of the kind. In this case, with the double fracture there was but three-eighths of an inch shortening—so little, in fact, that to-day it is hardly noticeable in the man's gait.

Detroit, Mich.

EGYPTIAN OPHTHALMIA.*

BY PROFESSOR ERNST FUCHS.

A journey which I made to Egypt the past winter gave me opportunity to observe numerous cases of the ophthalmia which prevails there, and to compare it with the forms of the disease seen in Europe. The period of my sojourn was brief and the season of the year not altogether favorable, inasmuch as the most numerous and dangerous ophthalmias occur in the summer and autumn—a time when European tourists are not wont to visit the East. Therefore, in reporting my observations, I must plead the paucity of knowledge regarding this subject by modern oculists. The most exhaustive treatise yet published on Egyptian ophthalmia is that of Professor Hirschberg,† who, like myself, visited Egypt in winter in the capacity of tourist. Possessing a wide knowledge of ancient literature, he first discusses the question whether in the days of antiquity eye diseases were as widespread among the Egyptians as at present, and concludes that reliable proofs of this opinion are not extant.—I must say, however, that the passage from Pliny, cited by Hirschberg, seems to prove

* Translated by Joseph Helfman.

† Ægypten, Geschichtliche Studien eines Augenarztes. Leipzig, 1890.

the precise opposite, as it declares: "The Egyptians report that if anyone anoint himself on the 28th of the month of Thot (August) with the juice of the mouse-ear (*Myosotis*) early in the morning, ere speaking, he will that year escape inflammation of the eyes." At all events, it is certain that at the end of the Mediæval Ages a condition of things similar to the present must have prevailed, for the erudite Obadja wrote in 1488 that most of the inhabitants of Alexandria were afflicted with ophthalmia.

With respect to the present, every traveler in Egypt is at once struck with the enormous number of eye maladies. Volney reports that he occasionally counted in the streets of Cairo among one hundred passers-by, twenty blind, ten one-eyed, and twenty others with inflamed or suppurating eyes—this at the close of the eighteenth century. To-day the state of things is perhaps somewhat better, and yet one can scarcely pass along one of the more frequented streets of Cairo without encountering a number of the blind.—The latter are not led, as with us, but the unfortunate places his hand on the shoulder of some seeing person who walks ahead,—even if it be only a one-eyed man. Everywhere where there is a prospect of alms, the blind crowd together in throngs, for, in the first place, the Orient knows nothing of governmental provision for the incapable, but thrusts them upon private benevolence; and in the second place, charity is prescribed by the Koran.—The latter not only commands the giving of alms, but further prescribes the portion of his income which the true believer must annually expend in this way, though the injunction is scarcely obeyed to the exact letter.

Anyone, like the oculist, accustomed to readily note, even at a distance, morbid changes in the eyes, is surprised to observe how many people who come toward him on the street have only one eye, bear corneal scars, or have their eyelids covered with crusts and their optics but half opened. Passing through the bazaars where the people are huddled in little booths, reading or working, it is a common thing to see the book or work held at but a few centimeters' distance, just as the markedly shortsighted and amblyopic are wont to do. It may be asserted that in general the native Egyptian does not have his eyes wide and freely open, as is the habit among our population; indeed the drooping upper lid is rather typical of the race.

Prior to my visit I had been struck by the fact Oriental painters portray the natives with the upper lid somewhat drooping, and with an expression of somnolence, and it occurred to me that if the female heads were intended to represent studies of beauty, the painter must have sought to portray a languishing expression. I know better now, and am satisfied that the artists simply reproduced with fidelity what they observed in their models. It is that ptosis which may almost be regarded as characteristic of trachoma, a form of ptosis that has not heretofore received proper attention, still less been adequately explained. It has been supposed that the lid drooped because its weight had been augmented by proliferation of the conjunctiva. Unfortunately I see a good deal of trachoma in Vienna, and have convinced myself that the weight of the lid cannot be a cause. For example, a woman comes to the Clinic, merely complaining that for some time one eye has been smaller than the other, meaning by that that the opening between the lids is narrower. She shows a mild ptosis of one eye, and on reverting the lid a very mild trachoma is discovered, which has produced a thickening of the conjunctiva scarcely worthy of mention—but no other difficulty. Another time it may happen, on reverting the lid in such a case of ptosis, that but a few characteristic scars in the conjunctiva will be presented, the ptosis having thus survived the trachoma. This form of ptosis possesses an almost characteristic appearance, so that anyone who has frequent occasion to observe it surmises, even from a distance, the malady which it hides. It is by no means present in every case of trachoma, and a mild ptosis is most similar to that form which accompanies paralysis of the sympathetic; so that I should be disposed to hold that the smooth *musculus palpebralis superioris* was involved by the trachoma, rather than that the weight of the lid provoked the ptosis. Now it is this form of ptosis which in my judgment produces the sleepy appearance of most Egyptians.

The general impression made upon the traveler is, accordingly, the extraordinary diffusion of eye diseases. Accurate data, however, are thus far completely lacking, for in a land which has no census the enumeration of the blind and statistics of the blind are naturally out of the question. The only interest taken by the State in the welfare of the blind is manifested in the Moschee-al-Azhar, which is the seat of the High School of Arabian science, and in which a special department for blind students is maintained. The number of the latter was stated by Ebers to be 205 in 1886, furnishing a proof of the great prevalence of blindness in Egypt. Hirschberg reports that trachoma is the regular thing among Egyptians, and that among the schoolboys examined by him in the schools, only two pupils were found with healthy eyes.

I visited the hospitals at Alexandria, Cairo, Sieut, and Luxor, but only in the two latter is there a special department for eye diseases. I must confess that I have never seen a single Egyptian whose conjunctiva could be considered normal, even if he were in the hospital for some totally different cause. Thus all the attendants, and even several young Arabian physicians, whom I had occasion to examine, showed distinct traces of trachoma in their conjunctivæ. I doubt not that among the more well-to-do there may be many whose eyes are healthy, but with respect to the poorer classes I am of the opinion that, at least in Lower Egypt, scarcely one can be found who has escaped ophthalmia.

Now of what form is Egyptian ophthalmia? In Europe we apply this designation to trachoma, and until my journey I was of the opinion that the destructive Egyptian disease was trachoma, occurring there, however, in a more dangerous form, namely, in the acute form, which is so rare amongst us. I was confirmed in this view by Hirschberg's brochure, for he dwells on the identity of the Egyptian and European trachoma, and declares, in direct contradiction of the statements made by other travelers, that no flow of pus from the eyes is observed on the streets. We shall see presently that this error is due to the fact that Hirschberg visited Egypt in winter, when acute cases accompanied with profuse suppuration do not commonly occur. The cases which I have seen may be divided into four groups:

Cured cases of mild trachoma. These people considered themselves healthy, were often scarcely conscious that they had passed through an eye disease, and presented slight cicatricial modifications of the conjunctiva:

Recent cases, with pronounced papillary proliferation of the palpebral conjunctiva and meagre trachoma-granulations in the conjunctival folds.—Cases of purely granular trachoma, with profuse granulations resembling frog spawn in the conjunctival folds, with almost normal lid-conjunctiva, first described in detail by Arlt (*trachoma Arlti; trachoma verum*) I have never seen in Egypt, and according to the statements of local physicians they hardly seem to occur there:

More ancient cases with marked pannus and withering of the conjunctiva, which finally result in trichiasis and xerophthalmus.—In a number of cases blindness is caused by these modifications, but in by no means the greater number; the latter belong rather to the fourth group, which comprises:

Cases with large corneal cicatrices (leucomas), as well as with atrophic and phthisic pupils—in brief, cases in which extended suppuration of the cornea has preceded; the larger number of the totally blind and the half-blind encountered in the streets are of this class.

Among all these cases there is not one which might not be encountered just as well in a European clinic. But even though the tableau of symptoms in each individual case is familiar enough, nevertheless the collective tableau of all cases varies materially from that observed in Europe. This consists in the immense dissemination of the evil, which extends to almost all the natives; it is further accentuated by the fact that in Egypt the eyes of children are diseased during the first years of life. It is true that amongst us also small children are occasionally found suffering from trachoma, but so exceptionally that there is a general tendency to ascribe to children a species of immunity. The principal difference seems to reside in the fact that such an extraordinary number of cases is seen in Egypt of pronounced leucoma or shriveled pupil. The latter presupposes extended corneal ulceration—which we do not see as a consequence of trachoma. Among

Europeans the trachoma often produces, besides the pannus, corneal ulcers, but they remain small and do not lead to total loss of vision; when blindness supervenes—and that occurs only in instances of extraordinary severity and neglect—it is a sequel of the pannus or secondary modifications, such as xerosis of the cornea, ectasia of the corneal cicatrices, with increase of pressure, etc. Inasmuch as I never saw, even in Egypt—aside from one single case—fresh corneal suppuration in consequence of ophthalmia, I cannot judge from my own observation respecting its development. In this connection I must appeal to information derived from practicing colleagues in Egypt, among the latter were the lamented Doctor Brugsch and Doctors Kartulis, Berard, and Phronimos, according to whose unanimous declarations two large groups of ophthalmic cases are to be distinguished: the acute and the chronic.

The acute cases are preëminently dangerous. They occur throughout the year, but during the winter months are exclusively sporadic. Beginning, however, with the "cutting of the Nile," they increase with alarming rapidity.—This phrase is applied to the opening of the dams for the purpose of giving the swollen waters of the Nile access to the irrigation canals. The "cutting of the Nile" occurs about the middle of August, and concurrently begins a period of great humidity, often united with great heat. At the beginning of October the overflow reaches its maximum, and then the waters begin to recede very gradually. The period of acute ophthalmias extends from August to November. These inflammations proceed amid pronounced suppuration, the corneæ being thus rapidly destroyed. In this way the great number of blind are produced, extended corneal cicatrices or withering of the pupil remaining ever after as a manifestation. In the pus-like secretions of such cases the *gonococcus* may be uniformly found, so that they must be indubitably regarded as acute blennorrhœas or gonorrhœic ophthalmias.

At the same time numerous other acute conjunctival inflammations occur, but they run their course with less intensity, and bear the stamp rather of a very violent, acute catarrh. In the pus-like secretions of such eyes a bacillus is found, which Koch, Weeks, and Kartulis have described; the latter showed me preparations of it. This bacillary ophthalmia is looked upon by the foregoing physicians as a violent *ophthalmia catarrhalis;* it is, as a rule, benign, the cornea being attacked only in neglected cases. Occasionally mingled forms are encountered, in which both gonococci and rod-bacilli are simultaneously discovered in the secretion.

The symptoms of the chronic cases resemble those of our trachoma. A large number of them result from the acute gonococci ophthalmia, the latter leading to that chronic condition of the mucous membrane which we term chronic blennorrhœa. With respect to the appearance of the conjunctiva, these cases are not distinguishable from those of papillary trachoma chronic by origin; indeed, Dr. Brugsch was of the opinion that they were substantially the same—a view expressed by Arlt years ago. If one eye, suffering from acute blennorrhœa, in its acute stage infects another, the latter also acquires an acute blennorrhœa; but if in the eye first diseased the acute blennorrhœa has passed into the chronic stage and the disease is then for the first time communicated to another eye, it supervenes in the latter, not as an acute, but rather as a chronic trachoma. In a last analysis this would accordingly be parallel with gonorrhœic disease of the genitals.

But still another number of cases of trachoma do not proceed from acute inflammation, but develop gradually, unnoticeably, precisely as does trachoma generally among Europeans. Most of the natives are said to acquire trachoma in their childhood.

The communication of the disease is favored by the crowded habitations and the great uncleanliness, especially among the children of the poor. But even Arabs living amid better conditions often permit their children purposely to run about in rags and wallow in dirt, that they may escape the "look of evil." They fear that a handsome or well-dressed child will attract the envious glances of the passers-by, and are sure that these will draw down great harm. Those who are particularly superstitious are not loath to observe a little spot on the eye of their offspring, fancying that this will serve as a safeguard against greater ills.

Aside from communication of the disease through fingers, washing, and the like, it is probable that flies also aid in its spread. The fly-pest in Egypt is great. Though well prepared beforehand by books of travel, I was astounded when called upon to confirm the accounts with my own eyes. A few small children are playing before the hut or in the fields; approaching the youngsters, one fancies, and often believes, that they have painted black rings round their eyes; but on coming close, one sees that the black rings are dense circles of flies seated along the edges of the lids and at the inner angle of the eye. They seek for food in the secretion, without encountering any disturbance, for the children do not disperse the pests, knowing that others with unsatiated appetite would at once take their places. In summer the situation is, of course, much worse, and the faces of the children are said to then be quite covered. As the flies pass from one eye to the other, it is natural to assume that they are capable of conveying the secretion. Lucian Howe caused flies to pass over a gelatin plate, when from every foot-print a culture of germs was obtained. When the flies had been in previous contact with a diseased optic, the same micro-organisms developed on the gelatin culture as were found in the secretion of the eye. Howe also calls attention to the fact that the Bedouins of the desert, where flies are much less abundant, are much less afflicted by eye diseases. Hirschberg, on the other hand, is convinced that the insects have nothing to do with the communication of the disease; and among our Egyptian colleagues there is also great disparity of opinion on this point. I must say, however, that the dissemination of ophthalmia by flies seems to me not only possible but very probable, even though reliable scientific demonstration is yet lacking. The special distribution of the acute gonorrhœal inflammations in summer, and especially at the time of the Nile overflow, is explained in some quarters by the great heat then prevailing and aggravated by the concurrent humidity, whereby the conjunctivæ become reddened and relaxed and thus made more susceptible to infection; others point to the great swarms of flies existing at that particular time.

As I journeyed up the Nile from Cairo to Assuan, which is situated at the first cataract, I was struck by the progressive improvement in the external appearance of the natives' eyes. Particularly noticeable in this respect were the black Bescharin, living in the vicinity of Assuan, whose eyes were beautiful, wide-opened and brilliant. On my return to Cairo I was doubly impressed with the languid and clouded eyes of its inhabitants. Most travelers report that the ophthalmia decreases with the ascent of the Nile, and this fact was corroborated by the physicians of Upper Egypt. True, there also the majority of the natives are afflicted with ophthalmia, but its issue seems to be much more benignant. Accordingly the general observation made with respect to trachoma and its relation to great rivers is true of the Nile —that the disease becomes the more infrequent the further the traveler ascends the stream. Thus, trachoma is extraordinarily frequent in the lowlands of the Danube and Rhine mouths, and diminishes in frequency as these bodies of water are followed toward their sources; and in the mountainous homes of the latter, in Tyrol and in Switzerland, is altogether absent. In what manner this fluctuation of the disease is conditioned by sea-level, climate, etc., has not yet been established.

With respect to the Nile, another factor enters into the problem, which perhaps explains the diminution in the number of eye diseases on the upper river, viz., the lesser susceptibility of the black race, as is frequently asserted. The further one ascends, the darker grows the color of the Egyptians; in the Delta they are of a tolerably bright yellow hue, whereas in Assuan they are of a dark black-brown. Moreover, the latter region is peopled not only by Egyptians, but also by full-blooded blacks—the previously mentioned Bescharin, who are descendants of the ancient Ethiopians. These blacks are by no means immune from trachoma; in the hospitals of Lower Egypt, enough trachomatous blacks are to be seen; but on the whole, the disease seems to prevail among them with less frequency and less severity. American physicians—Burnett and Knapp—have mentioned the fact that the negroes living in America suffer very little indeed from tra-

choma. Hirschberg also states that the few Egyptians in whom he found the conjunctiva normal were Soudanese.

The Europeans residing in Egypt enjoy a tolerable immunity from the ophthalmia, so far at least as they belong to the better classes. They are not, however, always able to protect their children, for the latter are infected either by the trachomatous Arabian servants or by the flies.

The most important observation which I brought back as the fruit of this journey is to me the conviction that *ophthalmia Ægyptiaca* is no integral disease. The danger to the eyes of the Egyptians proceeds rather from two diseases: acute blennorrhœa and trachoma. The latter *per se* is the more frequent but the less dangerous, and the former is the most prolific cause of the many cases of blindness.

Vienna, Austria.

MICRO-ORGANISMS OF THE MOUTH.

BY J. HOWARD MUMMERY, M.R.C.S., ENG.

Some attention has lately been drawn to the investigations of Doctor Filandro Vicentini, of Chieti, Italy, on the cryptogamic flora of the mouth, and I am in the somewhat difficult position of having to describe these researches without being able to consult the original in English, no translation having yet been made from the Italian. I have been compelled, therefore, to rely upon the author's summaries and letters, and upon the Italian description of the plates.

Doctor Vicentini's communications are comprised in three papers, communicated to the Royal Medico-Chirurgical Academy of Naples: the first, published in 1890, "On the Sputa of Whooping-Cough;" the second in 1892, entitled, "New Bacteriological Studies on the Sputum, and on the Morphology and Biology of the Micro-organisms of the Mouth;" and a third memoir, published in 1893, on "*Leptothrix Racemosa.*"

The question raised is one of considerable interest, although I venture to think there are very few who will be prepared to follow Doctor Vicentini along the path of speculative deduction upon which he appears to have entered. He claims to have discovered a new form of micro-organism in the mouth, which he calls "*Leptothrix racemosa.*" This organism is described as a very highly specialized one, resembling in its mode of reproduction the *Algæ*—the class of cryptogamic plants immediately above the fungi. As there is a good deal of misconception as to the real significance of the term *leptothrix*, I will first present a short description of what is now understood by the term; then will proceed to describe the organism which the author calls "*Leptothrix racemosa;*" and finally, will deal briefly with Doctor Vicentini's views (so far as I am able to understand them) as to the significance of this organism and its relation to the other bacteria of the mouth.

Leber and Rottenstein, in their work on "Dental Caries," published in 1867, refer the organisms found in carious teeth to elements of the leptothrix fungus, and speak of them as characterized by the formation of a beautiful violet color when treated with iodine and acids. The term "leptothrix" was really indiscriminately applied to various organisms in the mouth, some giving the violet iodine reaction, some not, some showing distinct articulations, and others none at all; in fact, as Doctor Miller remarks in "Micro-organisms of the Human Mouth":

> Almost every living organism occurring in the mouth was designated by this common name. Hallier and many of his successors up to the present time adopted this view. The motile bacteria of the mouth were regarded as the swarm spores of *Leptothrix buccalis*, the immotile (cocci, etc.) as the rest spores. Elements of *Leptothrix buccalis* were found everywhere.

The term "leptothrix" is now usually restricted to the forms of micro-organism which occur in the mouth as long, thin threads, which show no divisions or articulations, and which are not colored violet by iodine and acids. Very little is known with any certainty of the biology of these leptothrix forms in the mouth, since they resist all attempts at cultivation in artificial media.

If a scraping from the fur which forms upon the teeth is examined under the microscope, a matted collection of organisms is found, chiefly made up of masses of interlacing filaments, enclosing in their meshes numerous micrococci and bacteria. To this

thread-form, which is unjointed, and does not yield a violet color with acids and iodine, Doctor Miller gave the name of "*Leptothrix innominata;*" the micrococci entangled in the meshes he does not consider to have any genetic connection with the thread, although they were formerly regarded as its spores.—These threads and granules take a yellow color with iodine and acids, but have no violet reaction. The long chains of bacilli which do show a violet color with iodine, the same author calls *Bacillus buccalis maximus*, and the chains of micrococci which also show the same color he entitles *Iodococcus mangus*. Other straight or curved filaments, much resembling the *Bacillus buccalis maximus*, but showing no violet reaction with acids and iodine, he terms *Leptothrix buccalis maxima*, but whether this is a distinct organism from the *Bacillus buccalis maximus*, or simply younger cells of the same organism, which in this stage do not yield the characteristic violet reaction, he is unable to determine.

We thus see that "leptothrix" means very little as a strictly scientific term; it has been used as a convenient name by which to describe many different forms of buccal microorganisms; and even when the subject is reduced to something more like order by the above classification, we are still in complete ignorance, so far, as to the life history of the leptothrix and the genetic relations of the different forms. Moreover, Doctor Vicentini has assigned to these organisms an importance even greater than they were supposed to possess before: The organism hitherto known as *Leptothrix buccalis* (and likewise the *Leptothrix innominata*, *Leptothrix buccalis maxima*, and the *Bacillus buccalis maximus* of Miller), he proposes to call *L. racemosa*, in order to indicate its fructification. This fructification or sporulation is only found in the upper layers of the leptothrix masses, whilst the old filaments of the same organism occupy, according to him, the deeper layers, and constitute what has been formerly and generally described as *Leptothrix buccalis*.

Vicentini advises that the outer surface of the white deposit upon the teeth be very gently scraped with a needle, and a minute portion about the size of quarter of a millet-seed placed upon a glass slide with a drop of a weak solution of lactic acid; this should be done in the morning, fasting, before there has been any abrasion of the surface by tooth-brush or food. The preparation should then be teased out with needles upon the slide, adding to it a drop of a solution of iodine; next the cover-glass applied and gently compressed to thin out the preparation; then it should be left to stain for about fifteen minutes. Now examine under the microscope, when, according to the author, it is necessary to use a $\frac{1}{2\,6}$ immersion lens to see the appearance he describes as resembling bunches of grapes. He speaks of this as consisting of: the fertile filament or central stem with reserve gemmules inside; the peduncles or sterigmata, arranged in six longitudinal rows; the sporules; and a gelatinous protective envelope. He also declares the sterigmata or threads by which the sporules are implanted on the outside of the central stem cannot be seen with a lower power than a $\frac{1}{2\,5}$. He describes other structures, as the adult male organs, which can be studied with lower powers, and a younger condition of these male organs (antheride or spermogones) which are very minute—these, he thinks, are best treated with anilin dye, without washing the preparation. He is very anxious that the occurrence of these forms should be corroborated by others, and it is certainly very desirable that thorough examination should be made by competent observers for the purpose of corroborating or contradicting these descriptions.

In connection with Doctor Miller, in the summer I made two attempts to see these organisms, and on both occasions we were alike unsuccessful; but once, quite recently, I certainly did detect appearances very similar to those organs which Doctor Vicentini compares to grape bunches, and made drawings of them at the time. The regular lines of rounded bodies, which he considers as spores, were plainly seen, and likewise the central stem, but I was unable to determine the minute peduncles by which he describes the spores as attached to the central stem; the club-shaped appearance of these bodies was also very evident. Thus far, however, I have been unable to detect anything that I can identify as corresponding to the two forms of the male organs, although I shall renew the attempt, for I do not consider I

have yet done full justice to the author in my researches for these.

The forms which I saw certainly seem to be too regular in shape to be explained as an accidental accumulation of granules or micrococci around an isolated filament (an explanation which has been given by some observers). Looking upon these appearances as representing the male and female organs of the leptothrix, Doctor Vicentini considers that this organism, in its mode of reproduction, shows analogies to both the fungi and the algæ.

While, however, I do not question the possibility of the existence of all the forms described by Doctor Vicentini, although at present his observations need decided confirmation by independent skilled observers, yet I think, in passing to the more theoretical part of the author's communications, one finds it very difficult to follow him, or, in the present state of bacteriological knowledge, to agree with his deductions. I cannot but feel, however, that whatever we may think, it is difficult to do full justice to the arguments advanced without having the English translation for comparison. Doctor Vicentini considers that the forms of micro-organisms hitherto known in the mouth consist either of the inferior phases of this one micro-organism, the *Leptothrix racemosa*, in either the filiform state, the dissociated state, or the zoögleic state; or, secondly, of the sporules detached from the female filaments (the grape bunches); or, lastly, of the male elements, the antherozoids detached from the adult male organs, and freely swimming in the fluids of the mouth.

To the first group (the inferior phases of the *Leptothrix racemosa*) he refers the filamentous forms usually called leptothrix, the bacilli and the bacteria, as well as vibrio-spirillum and spirochæte; to the second group (the detached sporules of the female filaments) he ascribes the micrococci found in the mouth; and to the third group (the detached male elements) he ascribes the comma-shaped bacilli and some other forms. He finds this same organism, the *L. racemosa*, in the sputum of whooping-cough and other diseases, and goes so far as to consider several of the pathogenic bacteria, as the tubercle bacillus, the pneumococcus, and the gonococcus, as derivations of the same micro-organisms, and traces various transition forms which he illustrates in his paper.

These statements are so very revolutionary, and the position seems to be such a very untenable one, that one feels almost inclined, without having further proof, to pass over the theoretical part without discussion. But some eminent bacteriologists have from time to time promulgated somewhat similar views, and even such authorities as Nageli and Buchner have held that the species of bacteria are not fixed, but affected by variations in external conditions. Zopf founded a classification of the lower fungi on the basis of this view of the instability of the species, and there is the famous saying of Nageli, quoted by Fränkel and others, which is as follows:

> If my view is correct, the same species in the course of generations take different morphological and physiological forms, which in the course of years bring about, sometimes the sourness of milk, or the acid fermentation of sauer kraut, or the fermentation of wine, or the putrefaction of albuminous substances, or the reddening of food containing starch; sometimes producing typhus fever, cholera, or intermittent fever.

If the foregoing is correct, scientists have long been in error. But this view of the inconstancy of bacterial species has been rapidly losing ground, according as the methods for securing pure cultivations have been more perfected, and much doubt has been thrown by Flugge and others upon the reliability of the earlier experiments undertaken without the strict precautions now found necessary in making pure cultures.

It is well known that many micro-organisms are polymorphic, that is, they appear under different forms. Doctor Miller has described several of these organisms in the mouth, and in a recent letter says he has lately repeatedly found one form in dental pulps, which in pure culture shows two very distinct forms in the same colony, but in such a case the same organism always shows its own definite two or more forms as the case may be. These seem to be the definite morphological states of the particular organism.

Many micro-organisms when subject to abnormal conditions, such as insufficient or improper nutriment, exhibit the so-called invo-

lution forms, which are often very unlike the species in which they occur, but if the abnormal conditions are removed the typical form is soon re-established; no permanent change has taken place.

Doctor Vicentini's views differ, however, from those of Nageli and Buchner, in that he derives the different organisms of the mouth from the different phases and portions of one parent organism. And there are grounds on which some such opinion might perhaps be founded; for instance, in the last edition of the Encyclopædia Britannica, article "Fungi," the following statement occurs:

In many fungi no sexual reproduction is known to exist, but it is generally believed that in such cases the plants are merely members of a cycle of generations, the other stages in their life history being unknown or unrecognized.

Whilst in the higher fungi there is a true sexual reproduction—both male and female organs being present—no such process has been traced to the fission fungi, with which medical research is chiefly engaged; as their name indicates, they multiply by division, and, under certain conditions, by the formation of spores.

In reply to the remark that his deductions do not harmonize with the results obtained by extended experience in cultivating mouth bacteria, Doctor Vicentini declares his arguments go to prove that culture experiments are not conclusive in deciding these cases of genetic connection; the inferior phases, as in cultures, being common to entire families, the fructification being the fundamental differential character of the cryptogamic species!

As Professor Miller pointedly remarks, how can we account under Doctor Vicentini's view for the many different pathogenic actions of the bacteria of the mouth? For instance, a pure culture of the micrococcus of sputum septicæmia, one to two days old, will invariably kill a mouse or rabbit; a pure culture of some other bacterium from the same mouth, under exactly the same conditions, may have no action at all. This seems very extraordinary if they are all derived from one single form in the mouth.

It is quite possible that, as the study and knowledge of these lower fungi advance, and the whole life histories of particular organisms are most carefully worked out, it may be found that some of these organisms are only phases in the life history of a more complex one, as suggested by Doctor Vicentini; but to the majority of observers it seems very improbable that so many distinct forms, differing not only in appearance but in vital action, should arise from one parent form only. In fact, there seems so little evidence on which to base this assumption, that one might, with almost equal justice, derive all the bacteria found in the body from this same organism, and this, I think, the author would scarcely be willing to admit.

I have endeavored to explain Doctor Vicentini's views as well as I can with the small amount of material at my disposal in an available form; and while I do not wish to be held in any sense responsible for these views, I think they are of sufficient interest to engage attention.

THE ÆTIOLOGY OF ECZEMA.

BY A. RAVOGLI, M.D.

Hebra's comparison of eczema to the irritation of the skin by croton oil, with due deference to this distinguished teacher, I believe to be incorrect. Like any other irritant, croton oil produces an inflammatory condition of the skin known as dermatitis. Dermatitis must be clearly distinguished from eczema, although the former may produce the latter; both affections are based upon an inflammatory process.

On investigating the clinical difference between these conditions, it is found that inflammatory processes of the skin, like those of any other organ, consist in vascular changes, hyperæmia, exudation, nutritive disturbance, and alteration of the peripheral sensory nerves. When is discovered an active hyperæmia accompanied by an effusion of serum and emigration of blood-corpuscles, we do not hesitate to consider the condition an inflammatory process, as it falls under the description of Celsus: "*Calor, rubor, tumor, dolor!*"

Auspitz* proposed to call any inflammation of the skin, whether superficial or deep,

*System der Krankheiten. Vienna, 1881.

dermatitis, while Hebra reserved this term exclusively for the deeper-seated inflammations. It cannot be denied that eczema is an inflammatory affection of the skin, and consequently a dermatitis; nevertheless every one experienced in management of diseases of the skin finds that eczema is an inflammatory process *sui generis*. We speak of eczema *erythematosum*, *papulosum*, *rubrum*, *impetiginosum*, or *squamosum*, as varieties but in degree, not in kind or cause.

Torok describes eczema as a chronic inflammatory alteration of the epidermis, accompanied with infiltration of serum and of small cells; and chronicity, according to this author, is explained by a tendency to relapse, either at the point of origin or in surrounding regions. Hence it may be held there is no true acute eczema, but that the malady so called is only relative.

The severity of the symptoms depends on the reaction of the skin of the individual to irritation.—For instance, the heat of the sun will in one produce an erythematous dermatitis, while in another it will produce vesicles and an abundant exudation, constituting what is termed an acute eczema, or *dermatitis calorica;* but neither of these constitutes a true eczema, though under favorable circumstances they, like any dermatitis, may be followed by eczema. I have often seen well nourished children of healthy parents with eczema around the nose, the chin, and in scattered patches on the cheeks; in these an abundant muco-purulent discharge oozes from the nares, and the eczema is doubtless a result of continued contact of purulent matter from the latter. So, too, cases of *eczema auriculæ*, spreading down the maxillary and cervical region, with formation of vesicles, pustules, covered with thick crusts, are frequent and derived from the fact the ear is affected with *otitis media purulenta*, pus of offensive odor being discharged from the meatus. I have often seen cases of eczema in the form of scattered pustules under poultices applied to suppurating surfaces, and which have remained for a long time in contact with the skin. I will illustrate these points by the following:

Case 1.—A professional nurse in a hospital had several patients with purulent discharge from the vagina. Twice daily she used to syringe her patients, introducing the nozzle with two fingers of the left hand; the purulent discharge often went between her fingers. She applied to me to be treated for *eczema interdigitalis*, and had plaques of eczematous eruption between the third, the fourth and the fifth fingers of the left hand, from the second to the first phalanges, consisting of small vesicles deprived of their epithelium, showing a raw oozing surface, with an itching and burning sensation.

Can we deny that the presence of the pus was the cause of this eczema?

Case 2.—A barber shaved customers affected with acne. He spread the soap with the dorsal surface of the right hand, and pustules appeared at this point. He called on me with eczema on the whole dorsal surface of the right hand, showing plaques of vesicles in different stages, some broken, covered with crusts, some filled with seropurulent fluid on an infiltrated basis, with innumerable rhagades towards the joints.

The man, in perfect health, never had any other trouble with his skin, and no other cause could be found than that pus had remained on his hands, rendered already tender from the continuous use of water and soap.

Examples like the foregoing might be indefinitely multiplied, and from the evidence I can only conclude that the presence of pus on the skin is one of the most effective causes of eczema. This conclusion receives support from H. Leloir,* who holds that impetigo is a contagious malady, and refers to cases of pustules and ecthyma which were communicated from the mother to the child, and *vice versa;* also reports the case of a man with impetigo of the beard, who by scratching transmitted to other parts of his body.

In scabies, the pustules are nothing but the spreading of purulent matter by scratching. Leloir came to the conclusion that the cocci of pus affect every layer of the skin from the epidermis to the deepest layer, causing inflammation, and that they find their way into the skin by any excoriation produced either by parasites or by any mechanical irritation. In his cultures he found the *Staphylococcus pyogenes aureus* in furuncles and carbuncles and in many

* *Journal des Maladies Cutanées et Syph.*, 1891: "Ueber die nach Impfung mit eitererregenden Mitteln entstehenden Hautkrankheiten."

cases of ecthyma, being in some cases mixed with the *Staphylococcus pyogenes albus*. Now, if these cocci from pus are capable of producing inflammation of every organ of the skin, why cannot they produce an inflammation of the epidermis, which we call eczema? To substantiate this view I found it necessary to resort to experiment, which I made with the *Staphylococcus pyogenes albus*.

The hair of the external portion of the ear of a rabbit was shaved off, the organ carefully washed, and then rubbed with a pure culture of staphylococcus. No alteration of the skin could be perceived. Another rabbit was prepared in the same way, and both ears were painted several times with croton oil, with the result that after twenty-four hours they were red, painful, and covered with vesicles. The left ear was then inoculated with the pure culture of the staphylococcus, the other being left intact. After four or five days, both ears presented the symptoms of dermatitis much diminished, the redness lessened, though the epidermis remained hard, dry, and scaly. Ten days afterward, however, the left ear began to show symptoms of eczema; small pustules formed, covered with yellow crusts, which when removed showed the rete mucosum oozing a serous fluid, and—a remarkable fact—the hairs were falling off, producing alopecia. The right ear was improving, the hardened epidermis scaling away, leaving a normal surface, the hair remaining intact except where the ears came in contact with each other. This eczema lasted over four weeks, after which time the crusts began to fall off and the skin to return to its normal condition.

From these experiments I feel justified in assuming that *Staphylococcus pyogenes albus* is a cause of eczema, and that the development of this germ under the epidermic cells produces the disease. In order that the staphylococcus may find a fertile soil for its development, the epidermic cells must be loosened and the germ allowed to penetrate beneath the surface. Inflammation of the skin, dermatitis, is therefore the most effective factor for the preparation of the soil for the penetration of this micro-organism. This preparatory requirement is perhaps the explanation why eczema has been held to be non-contagious; but if the ground is prepared, the disease certainly is contagious. Almost everyone can recall cases of eczema of the scrotum in which the eruption was communicated to portions of the thigh in close contact; and very often we see eczema of one leg speedily affecting the other. Scratching scatters the staphylococci about the skin and prepares the epidermis for their culture. By means of the finger-nails the patient takes the crusts, the serum, the purulent matter, to other parts of the body, where, finding the epidermis scratched and its horny cells loosened, they begin their work of reproduction. It is no serious objection to my statement that the husband, when affected with eczema, does not communicate the disease to his wife, for one must consider that, first of all, skin diseases produce a certain natural repulsiveness and therefore lessen the frequency or closeness of contact—and the same precautions extend to other members of the family; moreover, the healthy epidermis does not permit the development of the cocci, which may only occur with solution of continuity. But I do recall several cases of eczema of the breasts in mothers nursing children affected with eczema of the face.

The contagiousness of eczema is entirely dependent upon the condition of the epidermis, which allows the development of the cocci only when not in an exactly normal condition. My experiment plainly shows this: When I rubbed the ears of the rabbit with the culture of the staphylococcus, the result was negative; but when I rubbed the culture of the staphylococcus after the epidermis had been blistered with croton oil, the skin was affected with an eczematous eruption that lasted over four weeks. In many cases of eczema we can distinctly see the precedence of the irritation and dermatitis, and from them the pus is formed which produces the eczema. Take, for instance, *eczema infantile* which follows *seborrhœa capillitii;* the sebaceous masses are formed on the scalp, the glands are inflamed, and under the masses of sebum pus is formed; as soon as pus is formed, eczema begins.—From its origin this variety may be called *eczema sebaceum*, in order not to confound it with seborrhœic eczema, which I consider totally different from true eczema. As long as the sebaceous masses do not produce inflammation of the

epidermis, the affection remains a simple case of seborrhœa; but when the sebaceous masses macerate the epidermis, and produce inflammation with the formation of pus, the eczematous condition has began, and we have a true eczema. The child, annoyed by the itching sensation, rubs as much as possible, spreads the purulent secretion on the face and the ears, and thus the eczema extends.

In my experiments I discovered that from the time of the inoculation of the staphylococci to the appearance of eczema there is a period of incubation of from one to three weeks; and I believe that this period of incubation accounts for the supposed fact that sometimes an eczema recovers and then a short time after reappears again. It must be remembered that sometimes the cocci remain between the connections of the epidermic cells, and that with the naked eye or with a common magnifying glass nothing can be perceived; this perhaps explains why in one or two weeks eczema appears again as a "relapse." Such eczemas are often considered as of "nervous" origin.

The skin differs in susceptibility to eczema, some individuals affected with scrofula being much more liable thereto than others. But eczema is not transmitted by heredity, though the vulnerable skin may be, thus predisposing to the development of the disease. No peccant material is transmitted from parent to offspring, but only a weak constitution or an easily affected skin.

Neither do I agree with Doctor Bulkley,* who, to my mind, attaches entirely too much importance to the nervous system in the production of the disease. After studying a large number of patients suffering with eczema in every shape and form, I can say that in scarcely one could I find any nervous trouble; the only thing remarked was sleeplessness, the result usually of the itching sensation. I do not wish to dispute this point, however; not more than a year ago I admitted the existence of a nervous eczema produced by reflex action. Neither do I doubt the cases presented by Meyer,† Leloir, Tommasoli, Radaven, and others; but what I desire to ask is: Were all these cases of *true* eczema? As already said, I have seen cases of acute eczema follow dietetic disorders, such as excessive smoking, and, although one year ago I was inclined to call those cases acute eczema, to-day I am inclined to consider them as forms of dermatitis solely, with, perhaps, such qualifying adjectives as *neuritica*, *vesiculose*, etc. My rabbits when they contracted eczema had no moral shock, but on an inflamed surface of the skin was inoculated the culture of the *Staphylococcus albus*. In the same way, if all these cases were eczema, they derived it from pus on an inflamed skin. I am fully convinced, with Bulkley, that children at the time of dentition may have a vesicular eruption of the face; neither am I opposed to the belief of Scarenzio, that his patient had a vesicular eruption on account of the presence of a tapeworm in the intestines. I do not deny the presence of a vesicular eruption in women at the time of pregnancy or of the catamenia. But are these eruptions true eczema? I think not, but rather that they are merely cases of dermatitis, neurotic eruptions, herpes, etc. That eczema can follow these eruptions, there is no doubt, when we remember that a seropurulent discharge is furnished by the vesicles or by the bullæ, and the presence of the staphylococci on the skin could at this time produce eczema. By scraping with a sharp spoon upon the eczematous surface, and staining the scraping with methyl-blue, we obtain isolated epidermic cells that show a large quantity of staphylococci. Staphylococci in their development produce toxines, to which the tissues cannot remain entirely indifferent, and also toxalbumens. The toxalbumens, to produce their effect, require an excoriation or an abrasion, otherwise they remain harmless.

Bockert, in 1887, produced pustules by the artificial inoculation of the *Staphylococcus pyogenes albus* and *flavus*, and this furnishes another support to my theory. From Konrad and Boëdinger is derived the fact that as soon as pus staphylococci appear in a wound, healing *per primam intentionem* is disturbed. Staphylococci applied on the skin of the arms of the authors caused follicular abscesses, with this difference, that *Staphylococcus albus* and *S. aureus* produced mild irritation,

*Ueber die Beziehungen des Eczems zu Störungen des Nervensystems. 1891.

†De l'Influence des Emotions Morales. Paris.

while *S. citreus* produced severe suppuration and deep furuncles. From the different cocci different forms of eczema arise, a difference which also depends upon the different organs of the skin affected.

Although my work is not complete, it seems to me to justify the following conclusions, viz.:

Eczema is a local affection of the epidermis of a chronic inflammatory character, contagious under favorable circumstances:

It is caused by pyogenic micro-organisms (*Staphylococcus pyogenes albus*) developed upon a previous inflammation of the skin.

STUDY OF SIX CASES OF HEAD INJURY.

BY MANNING SIMONS, M.D.

It is difficult to divest one's self of the idea that fractures of the skull with depression of bone must invariably, or at least generally, be attended by symptoms indicative of compression of the brain; and there is scarcely a doubt that operative interference is based usually upon the presence or absence, immediately or soon after the occurrence of the injury, of such symptoms.

A fact practically illustrated by the succeeding cases is, that immediate symptoms supposed to evidence compression of the brain by depressed fracture, are by no means commonly present! Druitt has laid down a theoretical proposition, accurately sustained by personal experience, when he says: "It must be rare for a depression of the skull to cause great diminution of the brain cavity, so, although such diminution is very sudden, it does not seem likely that mere depression of fragments, often lying loose on the dura mater, is a frequent cause of compression. Insensibility, if present, is much more probably due to concussion or hæmorrhage."

Case 1.—F. T——, aged sixty-five years, admitted to hospital February 15th, 1892, a week before had been struck with a hammer, the blow rendering him unconscious for some hours. Two contused and lacerated wounds appeared on the head, one at the vertex, the other to the right and slightly posterior to this point. There was a rough edge of bone, indicating fracture of the skill, though the man presented absolutely no symptoms of compression, having walked to hospital. He complained of no pain, had no paralysis; pulse normal, as were pupils; no interference with respiration. An exploratory operation revealed the fact that a portion of the skull, about two inches in diameter, had been driven down upon the brain to the extent of half an inch; upon removal of this depressed bone a piece of the inner table was found loose between the calvarium and the dura mater, and likewise removed. The man made a good recovery.

Case 2.—A. N——, white adult, male, admitted to hospital December 14th, 1892, with a contused and lacerated wound on the forehead just above the superciliary ridges, about two inches in length, its centre being above the nasal eminence. A fracture was found involving the vertical portion of the frontal bone, the displaced fragment pressing on the dura mater. This fragment (about the size of a silver dollar), together with the detached crista galli and cribriform plate of the ethmoid, was removed; a portion of the horizontal plate of the frontal bone, about the size of a quarter-dollar, being detached from the roof of the orbit, was likewise taken away. The superciliary ridges on both sides were loosened, but as the attachment was apparently sufficient to insure vitality, and no pressure being exerted on the parts beneath, they were left in position.

Notwithstanding the extensive injury to the skull and dura mater and the pressure produced upon the brain, this man presented no symptoms of compression; even the effects of the concussion had passed off before his admission. He died in five days from suppurative meningitis, as evidenced by post-mortem examination.

Case 3.—Colored adult male, admitted to hospital January 28th, 1893, with depressed fracture just received from a blow by a brickbat. A contused and lacerated wound about two inches in length, just above the right eyebrow, extended diagonally across the forehead toward and almost to the roof of the nose, and already considerable ecchymosis and swelling of the right eyelid had supervened. There was some nasal hæmorrhage, but no symptoms indicating compression or other injury of the brain. From the frontal eminence, about one and a half inches to the right of the median line, the fracture extended downward and inward to the nasal eminence, to the supra-orbital arch, down to the ethmoid. Operation was performed on January 29th, the day after admission, and the fragments removed—portion of the frontal bone from the eminence to the supra-orbital arch, also a piece of the ethmoid. Beneath these fragments was a layer

of clotted blood, the removal of which brought into view the dura mater underneath uninjured. Recovery was perfect, and he experienced no untoward effects. He walked into the hospital soon after the injury was received, and presented none of the symptoms attributed to injury of the brain.

Case 4.—J. D——, colored adult male, admitted February 5th, 1893, with a compound skull fracture due to kick of horse, situate three inches above the external auditory meatus and two inches posterior to and above the angular process on the right side; no symptoms of compression or interference with brain function. Operation was performed February 7th, when the depressed bone was found so wedged in its new position that it was impossible to insinuate the front of an elevator beneath it, and as the only alternative a button of bone was removed with the trephine. He recovered perfectly, and is now working as a day laborer.

A reflection that ensues as the result of a study of these cases relates to the occurrence of serious brain symptoms following immediately or soon after a blow upon the head where there are no external evidences of fracture and depression, simple or compound; in such there may be scarcely any ecchymosis of the scalp to indicate the region to which the force has been applied. How, then, to deal with these cases, is a problem difficult to solve, and they involve an unusual degree of responsibility.—Still there are many published reports of bold and seemingly warrantable operations, and even brilliant successes accruing. Trephining for cerebral hæmorrhage and removal of blood-clot has been performed often enough, and with sufficiently satisfactory results, to apparently justify its performance and even to render it obligatory. So much, too, has been accomplished in the direction of cerebral localization as to in a measure render us conversant with cranial topography; at the same time, this increase of knowledge has not been sufficient to overcome all the difficulties in the way of accurate diagnosis, while it has greatly increased the responsibility of the surgeon both as to omission and commission. One of my cases so strongly points out the difficulties and duties in this respect that I reproduce it:

Case 5.—White adult male, was sent in from the country January 10th, 1893, with history of a blow upon the head by a locomotive a week before. He walked home after receiving the injury, and shortly after became unconscious, in which condition he remained. His extremities were cold; respiration slow; pupils dilated; right hemiplegia. The night of his admission to hospital he became collapsed, requiring whiskey hypodermatically and to be surrounded with bottles of hot water. There was no wound of scalp, only a very much diffused ecchymosis on the left side of the head; neither was there any evidence of injury to the skull to be elicited by palpation, and the symptoms ordinarily regarded as indicative of fracture of the base were all lacking. The indications pointing to brain compression were, however, marked, and the history—his ability to rise and walk after the injury, and the gradual supervention of the insensibility and hemiplegia on the right side—indicated hæmorrhage within the skull. Accordingly an exploratory trephining was made with the hope of relieving the pressure.

The incision followed somewhat the direction of the temporal ridge, terminating about one and a half inches in front of the left ear. The flap was reflected, the pericranium raised, and the crown of a trephine applied a little in front of and below the parietal eminence. A button of bone having been removed, a large quantity of dark blood that had evidently been effused for days between the dura and the skull escaped. The dura bulged up into the opening, and was tense to the finger; and as soon as it was opened, blood with small portions of brain substance escaped. The cavity that had been formed by the effusion of blood in the brain substance, admitted the whole length of the little finger, and extended downward and backward, when a limiting wall was distinctly encountered. Having been cleansed of clot and blood, this cavity was syringed out with boric-acid solution. A drainage-tube was then carried to the bottom, held in place by a silk suture passed through the flap, and brought out at the posterior extremity of the incision. The wound was closed by interrupted silk sutures, the head dressed, and the patient put to bed. After the operation he became semi-conscious, but there was no material improvement in his condition. The temperature ran up to 101° and the pulse became feeble. He gradually sank, and died January 13th. It is a matter of regret that no post-mortem was permitted.

It is perhaps not assuming too much to believe that, had this patient been sent to

the hospital earlier, and the operation performed sooner—within a few hours after the injury, before the brain had been compressed and altered beyond hope of recovery—the result might have been different.

The consideration of immediate operation in cases like the foregoing is urgent, when we reflect that statistics show the mortality of primary to be far less than that of secondary trephining; in the former it is 1.23 per cent., in the latter 33.5.

One case is so characteristic, and so positively evidences the duty and necessity to explore such accidents thoroughly by free incision of the scalp at the first examination, that I feel no apology is necessary for giving it place in this paper; it also strongly illustrates the fact that absence of symptoms of brain injury at the time of the fracture is no standard by which to estimate the probability of ulterior brain trouble.

Case 6.—S. R——, white, aged fifteen years, received a wound from a brickbat on the right side of the head on the morning of November 23d, 1893, the missile impinging on an area bounded by the temporal ridge above, by the continuation of this ridge in front with the external angular process of the frontal, by the union of the anterior inferior angle of the parietal and frontal behind, and below by the line of junction of the great wing of the sphenoid and the frontal; the wound was about an inch in length, and hæmorrhage profuse. The physician in attendance brought the edges of the wound in apposition by means of strips of adhesive plaster, dressed it antiseptically, and it healed quickly and kindly, without evidence of constitutional trouble. There were no symptoms of concussion or compression, and the boy went about his affairs as usual.

Two months after the injury, however, he cut a quantity of wood and carried it home on his head, and a few days later was seized with headache and fever; the almost cicatrized wound became inflamed and the scalp surrounding was swollen; but in a week all this had subsided, though complaint was made of a feeling of general lassitude and of an elongated palate. By the end of the next week he began to lose the use of his legs, and found exercise painful. It was now he was sent to Charleston for treatment. On arrival his condition was found aggravated by travel, and he exhibited constant nausea, sore-throat, intense headache, an expression of anxiety and suffering, and an intellect clouded and sluggish; he answered questions slowly and reluctantly; the pupils moved sluggishly, with a tendency to dilatation; both legs were partially paralyzed, but the loss of power was most marked in the upper and lower extremities of the left side. He was unable to stand, and barely able to draw up the lower limbs in bed with the assistance of his hands. Patellar reflexes were absent on both sides. The bowels were constipated, but micturition was not affected, there being neither retention nor incontinence; temperature depressed, ranging between 97° and 98°; general condition anæmic; no deflection of the uvula or apparent contraction of the facial muscles. On examination the wound was found to have healed, except a circular opening a quarter-inch in diameter surrounded by flabby granulations and giving exit to a small amount of watery pus—such an opening as is commonly found leading from dead bone. By palpation over the thin depressed cicatrix, a fissured fracture of the skull was easily demonstrated.

A horseshoe incision was made, following nearly the temporal ridge to the middle of the supra-orbital ridge on the right side, the tissues dissected up, and the pericranium raised. The depressed bone was triangular in shape, the sides measuring an inch, the apex directed forward, the base corresponding to a line formed by the anterior border of the parietal bone, the upper border being about one-fourth inch below the temporal ridge; it was not only fissured, but splintered, carious, and so firmly impacted that it was impossible to lift to its proper place with the elevator. It was found necessary to apply a small trephine close to the lower border of the fracture and remove a button of bone to secure working room. The depressed bone was cut away with *rongeur* forceps; was soft and yielded to the instrument readily. The skull in the neighborhood of the fracture, although not broken, was depressed in a circumference of half an inch or more, rendering it necessary to remove much more than that actually fractured. It was decided not to proceed further, as the dura did not appear to be much thickened by inflammatory deposit, nor was it depressed or adherent so far as could be discovered. A catgut drain having been put in position from one angle of the incision to the other, and held in position by silk sutures, and the flap adjusted, the wound was dressed with iodoform gauze and absorbent cotton. In ten days the boy walked down stairs, and in one month was playing base-ball.

Regarding the immediate dangers of com-

pound fracture of the skull, and of fractures of the base: Septic inflammation is common to all wounds not guarded by proper precautions, but in head injuries it presents difficulties not encountered to the same degree elsewhere, because of the inaccessibility of the skull cavity. Few of these injuries come under treatment immediately after their occurrence, and to a greater or less extent they have been subjected to septic influence. Wounds of the dura, therefore, are serious complications of compound fracture of the skull, because they admit germs and irritant fluids to the cranial cavity, and thus lead to septic meningitis—the great cause of death in compound fractures not immediately fatal from injury to the brain; this danger, of course, does not, or should not, operate to the same degree when the dura is opened under proper precautions; but when infection has occurred at the time of injury, or the wound has been exposed to such influence before it comes under treatment, the difficulties are manifestly increased.

It is probably true that the chances of rendering any wound aseptic diminish in proportion to the length of time that intervenes between its occurrence and the application of the proper means for its protection; the longer the interval, the greater the difficulty of attaining even partial protection, and if chemical antiseptics must be used their strength must be increased in proportion to the time of exposure.

Case 3 illustrates the danger of the occurrence of septic meningitis and the inability to arrest it by justifiable antiseptic measures. Drainage with the free flushing of the cranial cavity would be the only resource in this emergency. Can this be attained by justifiable surgical procedure, is a question that has presented itself after a study of the case; and if so, in what manner can it be accomplished? This is not a new suggestion; in a late textbook of surgery it is proposed, in "rare cases" of fracture of the base of the skull, that the ordinary means of attaining asepsis "approximately" may be added to by drainage tubes inserted into the cranial cavity through the nostril, if need be by puncture of the cribriform plate. Similarly it is suggested for draining the middle fossa that "the skull may be trephined above and behind the auditory meatus." Thorough disinfection and drainage must be an absolute rule.

Case 5, in history and results, suggests the lesson that the compound fracture when it comes under treatment is probably more or less septic, and if the dura has been opened a counter-opening should be made with the trephine at the most dependent part of the skull, above or below the tentorium as the case may require, at the time of the primary operation, and that thorough irrigation should be done in anticipation of the occurrence of decomposition in the discharges and the supervention of septic suppurative meningitis. The operation would not add much to the gravity of the procedure; and reasoning from analogy, and experience with wounds in other cavities and parts of the body more accessible, the procedure is more than justifiable to those who believe in the inherent tendency of septic inflammation to spread and destroy with its advance.

Charleston, S. C.

DEATH OF DOCTOR HAVA.

From New Orleans comes word of the death of Doctor Hava, well known for his connection with the "patriot" party in Cuba. Aside from his prominence in West Indian political matters Doctor Hava was a well known authority on medical jurisprudence, and moreover the first to recognize Beri-Beri when first imported from Africa. He was equally an authority upon cholera and yellow fever, in the treatment of both of which he was especially successful. His whole life was about equally divided between efforts to secure the independence of Cuba and researches in science. It is well known that he had indulged in very extensive researches upon the therapeutic and physiological action of the phosphates, and it is understood a posthumous work upon this subject will soon be published. One of his scientific inventions was a filter, the principle of which was to force the water through the rocks as in the case of mineral springs, which he maintained was the only true system.

Though bearing the unpretentious name of Hava, the Doctor's title proper was Marquis de Goasacualcos, and the fort of this name at Vera Cruz, Mexico, derives its cognomen from his grandfather.

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Editorial.

REMARKS ON THE USE OF OPIUM.

There is no drug in the whole materia medica which is so generally used, and likewise so generally abused, as Opium—this remark applies equally to its principal alkaloid, which with the advent of hypodermatic medication has become more popular than the original drug itself.

Of late so little appears to be known regarding Opium that the young practitioner frequently queries as to its action and its peculiarities, and therefore it is with regard to these two particulars that we propose chiefly to deal.

The primary effect of a small dose of Opium is stimulant; the secondary effects are drowsiness, depression of the arterial action, loss of appetite, constipation, and great mental languor. In larger doses, after the first stage of excitement has subsided, it is narcotic, anodyne, and antispasmodic. The dose requisite for the production of these effects differs in almost every individual, being influenced by age, sex, strength of patient, severity and character of disease to be combated, and by greater or less habituation to the drug. Some are particularly sensitive and are unable to take even the smallest dose without resultant delirium, high condition of nervous irritability, vomiting, or painful diarrhœa with clayey stools, and under such idiosyncrasies it should never be employed except as a *dernier ressort*—though an exception might be made in favor of occasional use in anæmia.

Infants, and children under ten years of age, bear the drug very badly; numerous are the instances on record where two or three drops of the tincture have induced fatal results. Therefore it is a safe rule never to administer to extreme youth except under very exceptional circumstances, and then only after very careful consideration of the individual case. And when it *is* deemed essential to administer an opiate—either to children or to adults—preparations should be sought whereof the strength is definite and regulated by a certain standard—that is to say, assayed for their percentage of morphia alkaloid. Some seem to think they can obviate all danger so far as children are concerned by employing some domestic nostrum—syrup of poppies, and the like—forgetting that these are the most dangerous of all, since they are always uncertain and variable as to strength, even when prepared by the most skilled methods.

Those unaccustomed to Opium, or who have never taken the drug, require much smaller doses to produce the same effect than do others who are more or less habituated to its use; dark-skinned people, too, require smaller doses, and one-half the dose for a white person will often profoundly affect the full-blooded negro. Combinations with other drugs greatly modifies action also; for instance, it acts as a sudorific in combination with ipecac; the constipating influence is obviated under the action of mercurials, and under certain conditions such combination also proves sudorific and diuretic; tartar emetic notably lessens the action upon the nervous system, and for this reason it was the fashion in olden days—and it is no way certain that medicine has benefited by the abandonment of this mixture—to prescribe together for the relief of cerebral congestion.

A common query is: What is the smallest dose liable to prove fatal? This has already been answered in a measure by the statement that the drug produces different effects upon different individuals; but it may be accepted that the known minimum fatal dose in an adult is four grains, and in the infant two drops of laudanum (Edward Waring). An enormous quantity has, however, been ingested by adults with apparent impunity, and in one instance at least, recovery took place after the swallowing of no less than half a pound of laudanum.

Half an hour is the limit within which crude or extract Opium will be found to manifest its effect, and at the termination of this period the dose may safely be repeated if the purpose for which it was administered has not

been attained—liquid preparations act somewhat quicker than the solid.

When given for the relief of pain, particularly of periodical character, a third of the quantity required to relieve the paroxysm will usually prevent its recurrence. In fact, it is a rule to those accustomed to the use of the drug to administer a moderate dose in the interval of paroxysms with the expectation of completely controlling the same.

An overdose will likely produce effects very similar to those of an underdose. Where a restless night resulted from an overdose it has often been the case that sound sleep occurred the succeeding night without a new prescription.

Opium is sometimes given with great advantage during the existence of inflammation; but if continued after the latter has subsided, stupor or troubled sleep, according to the degree of surplus administered, is certain to result.—To act as a hypnotic the drug should be given an hour or two before the usual hour of retiring, in order to allow the stage of excitement to pass.

The late Sir Thomas Watson always laid it down as a rule that the greatest care should be exercised how Opium is given in inflammatory diseases that tend to induce death by coma or apnœa, and adds:

If there be any unnatural duskiness of the face, if ever so slight a tinge of purple mingle itself with the color of the lips, this is an appearance which should warn you against Opium. It shows that the blood is imperfectly arterialized; and imperfect arterialization of the blood either results from, or conduces to, a state of coma. On the other hand, it is, *cæteris paribus*, in cases where the tendency is towards death by asthenia, that the use of Opium as a remedy for inflammation is most serviceable; thus it has a capital effect often, after depletory measures, in cases of peritonitis and enteritis.

Doctor Stokes remarks also that in cases of "recent inflammation of serous and mucous membranes, where depletion by blood-letting and other antiphlogistic measures are inadmissible, and the system is in a state of collapse," the exhibition of Opium has a powerful effect in controlling the disease; that "the poisonous effects are rarely observed in these cases;" and that the collapse and debility of the patient "tend to the tolerance of the remedy." He likewise corroborates the celebrated Graves, who "fed fevers," that the drug should rarely be resorted to in cerebral affections, since, while it may appear to do good in some instances, it is very apt to prove a "double-edged sword."

We may add the same is in considerable degree true of its administration in cardiac diseases, since the tendency is to paralyze both pulmonary and arterial action, and a circulation which is already but half oxydized is likely thereby to be still further depleted of its oxygen.

Opium acts more powerfully in the presence of acids than in that of alkalies; consequently in rheumatic diathesis, where the alkaline plan of treatment is adopted, it may be given without fear. So, too, during excruciating suffering, and in chronic painful maladies, it may be administered in toxic quantities without danger—indeed, in cancerous affections huge doses alone are of much service; but with the cessation of pain the remedy should be abandoned or greatly diminished in quantity.

In the treatment of high temperatures the action of Opium alone is most unsatisfactory; as a matter of fact, pyrexias excite the brain, and the first effect of the drug is to "add fuel to the flame." It is for this reason that the tartrate-antimony was so generally combined with Opium in the older days, the rule being: The greater the vascular excitement, the greater the proportion of antimony. Says Graves:

Each drug appears to assist the action of the other; and the relative dose must be determined by the circumstances of the case. In furious delirium the tartar emetic must be given in full, and Opium in small quantities. Where wakefulness is the chief symptom, the delirium being not very boisterous, the dose of antimony should be reduced, and the Opium increased.

This rule for the combination of the two drugs shows consummate skill in the prescriber—skill which all ought to aim at, even if few attain.

To attempt to treat of the range of diseases to which Opium is applicable would be an act of supererogation: It is safe to say it has been prescribed in every disease of the nosology. It is a pernicious fact that with

certain practitioners Opium is given in every case, no matter what the indication. To be sure, morphine has greatly replaced the crude drug preparations in the *armamentarium therapeuticum*, but, as already remarked, it is doubtful whether such general substitution has been advantageous to either physician or patient. In certain diseases, however, in which its use appears to have been abandoned, Opium in former days appeared to be of greater value—notably epilepsy and chorea. In the earlier stages of both these diseases remarkable tolerance was often manifested, and enormous doses at times given to produce rest without inducing any of the customary untoward effects.

In delirium tremens, too, the drug was and is, by many, considered the "sheet anchor" when judiciously employed, and under special conditions it proves a remedy of great value; but its indiscriminate exhibition is dangerous. It is an error to suppose that sleep must be induced as soon as possible, at all hazards—a belief that has been responsible for many deaths; the patients were killed by kindness. It is only in the earlier stage, in young and robust subjects, when there is much vascular excitement present, that Opium is of marked value, and then only when combined with ipecac or antimony. In the later stages where there is much depression, where the patient is old and perhaps has been subjected to repeated attacks, it may be advantageously combined with some stimulant. But it must be remembered that in delirium tremens anything that tends to vitiate assimilation is objectionable, and that Opium, by its depressing action on the visceral nerves, may prove highly prejudicial—a particular ill effect almost entirely overlooked by writers. In this disease, moreover, the subcutaneous injection of morphine, especially when hypnotic action is desired, seems to be preferable to the use of the crude drug; but, fortunately, in the majority of instances, chloral seems to answer a better purpose.

It should be remarked also that in obstinate constipation Opium often proves an effective remedy when all others fail. It must, however, be given in large doses in order to obtain the effect of relaxing the spasms of the muscular coat of the intestines —a condition in which irritant purgatives only serve to increase the mischief.

Also it may be said that Opium is a very effective abortifacient, but its mode of action and the form of its administration are not pertinent to this paper, though the fact should always be borne in mind when employing the drug in the treatment of pregnant women.

NOVELTY IN INOCULATION.

The latest is inoculation for the bite of serpents. Two physicians (of France, of course), Messrs. Phisalix and Bertrand, believe that by heating viper virus to a temperature of 85° C. they have succeeded in so weakening it that small animals will bear it with impunity, and so now claim that the animals thus treated are "protected from the effects of future snake-bites." They expect to see their plan adopted in all countries where venomous snakes abound.

There is an item of truth in the idea, for it is well known that those who have once recovered from the bite of venomous serpents are to a greater or less degree immune. Personal experience with serpents' poison, however, leads us to believe that heating renders the venom innocuous.

AMYL NITRITE AND COCAINE.

It is worthy of remembrance that Amyl nitrite and Cocaine are mutual antidotes. Doctor Schilling recently recorded the case of a lady who carelessly spilled forty drops of Amyl nitrite on the front of her dress, and when seen was excited, restless, with terrific headache, vertigo, palpitation, distorted vision (everything appearing yellow), face red, carotids pulsating violently, and pulse eighty but of moderate tension and volume; though conscious, she staggered in her gait. He immediately injected fifteen minims of a five-per-cent. solution of Cocaine hypodermatically, when in a few minutes the symptoms vanished. The vaso-dilator action of the Amyl nitrite was counteracted and antagonized by the vaso-constrictor influence of the Cocaine.

Amyl nitrite is therefore an antidote to Cocaine, and in consequence one in giving an injection of this local anæsthetic should not be without its antidote at hand.

PEPSIN LAVEMENTS IN DYSENTERY.

Pepsin has been applied to very many of the diseases of the nosology, yet it remained for Doctor Summers, of Waukesha, Wisconsin, to discover that it possesses a most satisfactory therapeutic action in dysentery. He washes out the bowel with a strong solution of Pepsin (one-half ounce to six ounces of warm water) every three hours, which act, he declares, "clears off the mucous surface effectually." He next employs a soothing injection such as laudanum and starch, as hot as can be borne. He declares that after two or three washings and injections the patient expresses great relief, and healthy action is at once set up, when, if constitutional conditions receive due consideration, rapid healing follows.

EDITORIAL NOTES.

The Press and Quackery.—

The lay press are continually animadverted upon because of their support of quackery. The following, published in the Detroit papers, is a specimen of how charlatans are able to secure deadhead advertising:

"Dr." Chan Ouan Hing, *alias* Joseph F. Chan, has registered at Detroit under a diploma from the Kwang Joie "College," Canton, whose contents, translated, are as follows: Dr. Lee, chief examiner for the Government, second degree of the rank of wearing peacock's feathers for special attendance at the Gong Wo College of Physicians and Surgeons. This certificate is for the examination in the practice of medicine as physician, that the practice of medicine may be promoted in order to guard and protect both the exalted and the lowly. Now the bearer, Chan Qan Hing, although young, has sufficient character and knowledge. He was examined at Kwang Joie College of Physicians by Dr. Fond. His learning entitles him to be a doctor, having passed the examination of the second grade of first degree at this college. I therefore encourage him and give him this certificate. He must be kind to the people and use his knowledge to the best of his ability, doing nothing rash in his practice to render futile this examination of our college. This certifies that he may practice where he pleases in the gateways and throughout the cities and the country. No. S. O. D. 362—First month and fifteenth day, seventh year of Kwang Shui, Emperor (1881). (Seal.)

No doubt Doctor "*alias* Joseph" Chan is being "managed" by some astute American for the benefit of his own pocket.

It is not long since two or three young men from the neighborhood of Blenheim, Ontario, one of whom was somewhat swarthy, swindled the public in Detroit and elsewhere; a wonderful Chinese physician named "Gun-Wah" was personated by the swarthy youth. Of course the claim was made that all diseases succumbed to the magic of the sham Celestial, and the gang reaped a rich harvest for a brief period, but met a "Waterloo" in Denver, Colorado, where, it is understood, two fell into the hands of the law, and the third found it convenient to seek a more congenial clime.

Practice of Medicine in Virginia.—

The Virginia Legislature has passed a bill revising the act regulating the practice of medicine and surgery in that State. As amended, no physician now legally practicing in Virginia can be denied a license or be arrested for continuing to practice without appearing before the Examining Board. The limitation ends, however, with those residing and practicing in the State prior to the passage of the act.

The American Medical Association.—

Members of the National association will do well to remember that it meets in San Francisco on the fifth day of June.

The transcontinental railroads have made a rate of $65.50 for the round trip from all Missouri River points, which is but one and one-twelfth fare. The Southern Pacific rates from Portland, Ogden, and El Paso are one fare. All tickets sold carry coupons of admission to the Midwinter Fair.

Thyroid Extract.—

One of the latest applications of thyroid is in the treatment of obstinate and tertiary syphilides. It is said to induce marked desquamation and healthy action of the skin. During its administration it is advised that all mercurial treatment be stopped and dependence placed upon the thyroid alone—except, of course, such as may be had through appropriate tonics and nourishing dietary.

Items and News.

Nostrums and the Medical Profession.—

The Medical Society of the District of Columbia recently adopted resolutions denouncing the advertisements of nostrums in the public press. An exchange, the editor of which seems to have been the chairman of the committee that drew up these resolutions, publishes them with most favorable comment in its reading pages. But on its advertising pages it spreads the recommendations of most of the nostrums with which the medical profession has recently become only too familiar. The denunciation on the one page helps to float the advertisements on the other. Evidently the denunciation cannot refer to the secrecy, or the false claims of efficiency, but entirely to the unprofessional custom of advertising in the public press, instead of in a journal owned and published by a doctor.—*Philadelphia Polyclinic.*

Plea for "Old-Fashioned" Remedies.—

Doctor Samuel Wilks speaks up for four old remedies: Belladonna for Graves' disease; Fowler's solution for idiopathic anæmia; Iodide of potassium for tuberculous peritonitis, and; Dover's powders for chronic diarrhœa and dysentery. He has often met success from the use of half-grain doses of extract of belladonna thrice daily in Graves' disease, after other agents had failed. In idiopathic anæmia five-minim doses of Fowler's solution, thrice daily, have relieved many cases. Tuberculous peritonitis has succumbed to iodide of potassium, combined with the application of blue ointment to the abdomen. And he has rarely failed to arrest chronic diarrhœa and dysentery with Dover's powder, five grains three times a day, and dilute sulphuric acid.—*Times and Register.*

Good Enough!—

The *Atlanta Medical and Surgical Journal* is responsible for the following:

"A gentleman walked into a drug store and inquired: 'Are you a pharmacist?' 'Yes.' 'Registered?' 'Yes.' 'Well, I guess you can give me a pound of borax.'

"And this reminds us of a late occurrence in this city. One of the vaccinating corps called at a certain place, when the lady inquired: 'Are you a doctor?' 'Yes.' 'Regular graduate?' 'Yes.' 'From what school?' '—— Medical College.' 'How many years have you practiced?' 'Four.' 'Well, you may vaccinate my cook.'"

Chloral Alcoholate.—

It is well known that the presence of Chloral alcoholate in chloral hydrate renders the latter dangerous. Doctor E. Hirschsohn declares it may be detected by pouring one cubic centimeter of nitric acid, of specific gravity 1.38, over one gramme of the suspected chloral. At the ordinary temperature or on warming, no yellow color or yellow fumes should be developed within ten minutes. One per cent. of alcoholate may be detected by this method.

The Souls of Animals.—

Canon Wilberforce, in a recent interview published in the *Westminster Gazette*, contends that the lower animals are immortal, and uses his belief as an argument against the establishment of a Pasteur Institute in England. For all that, he doubtless takes his roast beef with as much satisfaction as if it had not been necessary to set free an immortal soul in order to procure it for his table.—*Medical Record.*

Leprosy in Greece.—

Strange to say, leprosy is more prevalent in Greece than is generally suspected, and makes its appearance between the tenth and twentieth year of life. There are twice as many male lepers as female. On the leper farm near Nicosia, Cyprus, there is a woman over eighty years of age, who has suffered from the disease for sixty years.

Strange Accident.—

A farmer of Huntingdonshire, England, inadvertently swallowed a wasp while drinking a glass of ale. His throat began to swell immediately, and tracheotomy had to be performed soon afterwards in order to avert suffocation. The patient was saved with difficulty.

Fibroids.—

Pregnancy has been mistaken for uterine fibroid, and *vice versa*. It may be well to remember that in the former the os is soft and spongy, while in fibroids it is dense and hard. With the history of the case no one should be at fault in forming a proper and definite conclusion.

Bronchitis.—

Bronchitis is most fatal in England, there being nearly twelve hundred deaths in each ten thousand of population from this malady. The English troops, however, suffer most from the disease in Canada, and least in St. Helena and Malta.

A Handsome Donation.—

The Medical Department of Laval University, Montreal, has received $3,000 from Reverend Abbe Colin. The sum was given with the proviso that it should be employed to purchase necessary scientific apparatus.

An Early Ovariotomy.—

There is now living in Philadelphia in excellent health an unmarried lady, eighty-one years old, for whom the late Doctor John T. Atlee performed ovariotomy more than fifty years ago.—*University Medical Magazine.*

Hospital Abuse.—

Mr. Herbert Spencer says thirty per cent. of the people in London are frequenters of hospitals and dispensaries, so that the largeness of this proportion makes it clear most of them are able to pay their doctors.

Compulsory Vaccination.—

In 1874 vaccination was made compulsory on all persons in Germany. In 1880 it received a like compliment in Japan, and 1,459,000 persons were operated on, with only three per cent. of failures.

The Ruling Passion.—

Doctor: A careful diagnosis of your case leaves no doubt that you have stone in the bladder.

Solomon Isaacstein: Doctor, do you tinks it is a diamont?

Test for Pus in Urine.—

Drop into urine in a test tube a few drops of the tincture of guaiac, heat it to about 100 degrees, and if it turns pale blue, pus is present in the urine.—*Exchange.*

Accidents with Chloralose.—

Doctor Bardet declares Chloralose produces an excito-motor action on the spinal cord, which should inspire considerable hesitation in its administration.

Cheeky.—

The Christian Scientists of New York have introduced a bill before the Assembly to legalize their peculiar craze. The bill will probably (not) pass.

The Success of Pasteurism.—

There are seven Pasteur Institutes in Russia, yet the official Government reports give forty-two deaths in the same from hydrophobia.

Book Reviews.

AMERICAN TEXT-BOOK OF THE THEORY AND PRACTICE OF MEDICINE. Vol. II. Edited by William Pepper, M.D., LL.D. Cloth; large 8vo; pp. 1046. Price, $5.00; sheep, $6.00. W. B. Saunders, Philadelphia.

The first volume of this treatise appeared something over a year since, and received review in these columns. The present volume evidences that the excellencies of its predecessor have been well sustained. Doctor Welch writes on bacteria, infection, and immunity; Doctor Lyman on diathetic disease, acid dyscrasia, osteomalacia, obesity, biliary lithiasis, gravel, diabetes, polyuria, rheumatoid urethritis, gout, and rheumatism; Doctor Osler upon blood, adrenals, and ductless glands; Doctor Pepper on the heart and large vessels, the mediastinum, mouth, tongue, salivary glands, pharynx, tonsils, œsophagus, stomach, and intestines; Doctor J. C. Wilson on the nose, larynx, bronchi, and pleura; Doctor Delafield on the lungs and kidneys; Doctor Holland on urinalysis; Doctor Fitz on the peritoneum, liver, and pancreas.

This work is practically a series of monographs, and presents a medium between the student's text-book and an elaborate system of medicine. Such a work has both advantages and disadvantages; but the latter are greatly overshadowed by the former. Indeed, we may regard with pride this distinctively American work, and its value is greatly enhanced by the fact it has been so carefully edited as to bring our knowledge down almost to the very hour of publication.

DISEASES OF WOMEN. By Henry J. Garrigues, A.M., M.D. Cloth; 8vo; pp. 690. Price, $4.00; sheep, $5.00.

One of the chief values of this volume is that it will supply to great extent that particular education for which practitioners seek the hospitals and post-graduate schools. It is emphatically a volume for the busy medical man, and is calculated to bring him abreast of recent progress and inform him of all that is best. It is no less valuable to students because of its concise, practical nature, its elimination of all reference to historical development, its clear noticeable absence of theoretical discussion, and the fact that even abstruse pathology is largely ignored. The details of diagnosis, however, are minute, and there is afforded manifold information about points which may be sought for in even larger and more pretentious works in vain.

The illustrations form a complete atlas of

embryology and anatomy of the female genitalia, representing numerous operations and pathological conditions. These alone are desiderata seldom supplied by works of this character.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 a year. Charles Scribner's Sons, New York.

The May number opens with an article of unusual importance entitled "Some Episodes of Mountaineering," by Edward Lord Weeks. Then follows "John March, Southerner," chapters XXX–XXXIV, by George W. Cable; "The Provincials," by Octave Thanet; "A Pound of Cure," a story of Monte Carlo, chapters V–VI, by William Henry Bishop; "The American Congo," by Captain John G. Bourke, U. S. A.; "Womanliness as a Profession," by Aline Gorren; "Afoot," by Charles G. D. Roberts; "Working-Girls' Clubs," by Clara Sidney Davidge; "Alone," by Melville Upton; "That Good May Come," by Edith Wharton; Two Sonnets, "A Talking Race"—"To One Who Sleeps," by Edith M. Thomas; "Climbing for White Goats," by G. B. Grinnell; "The Ethics of Democracy," with particular application to liberty, by F. J. Stimson; "The Point of View:" Science and Song—The Passing of Man—Truth and Stage-Truth—Objections to Cleverness.

THE DELINEATOR. Price, 15 cents; $1.00 a year. Butterick Publishing Co., Limited, New York.

The May number contains three articles especially interesting to students, viz.: "A Girl's Life and Work at Vassar," "A College Commencement," and an illustrated paper on "Commencement and Graduation Gowns." Edith S. Tupper contributes a sensible article on "Women in Journalism," and Eleanor Georgen treats of "Pantomimic Expression;" "Uses of Crepe and Tissue Papers" introduces some pretty articles for decorating the lunch-table;" "Wise Living" gives good advice about eating, "Mother and Daughter" of the many ways in which the latter can benefit the former; "A Leather Wedding" and a "Logomachy Party" are entertainingly described; some new desserts are given, and in "Tea-Table Talks" many sensible topics discussed. There are many new designs in knitting, crocheting, etc.

MCCLURE'S MAGAZINE. Price, 15 cents; $1.00 per year. S. S. McClure, Limited, New York.

The May number offers an unequaled series of portraits of General Grant, covering his life from the time of his cadetship at West Point to his closing days at Mount McGregor; biographical reminiscences are contributed by Colonel Grant, Generals Porter, Howard, and Parker. An autograph letter by General Grant's father, written in 1865, gives new glimpses of the career of this famous man.

Mr. Cleveland Moffett, and the well known artist Mr. J. Hambidge, contribute a most interesting illustrated article on "Wild Beasts and Their Keepers." Bret Harte gives a California story; R. H. Sherard writes of "Flammarion," the French astronomer; and Mary T. Earle contributes an illustrated story of the "New South."

THE OVERLAND MONTHLY. Price, 25 cents; $3.00 a year. Overland Publishing Company, San Francisco.

Notable articles in the May number are: "Egypt To-day," by Honorable Jeremiah Lynch, author of "Egyptian Sketches;" "The Palmistry of China and Japan," by Professor Stewart Culin, of the University of Pennsylvania; "The Collie in Mendocino," a beautifully illustrated paper; "The Nicaragua Canal," by Lieutenant Winn, U. S. A. (military advantages), and Captain W. L. Merry, Consul General of Nicaragua (political aspect); "King Solomon's Mines," a Malayan sketch, by Rounsevelle Wildman; "The Chinese Six Companies," by an educated Chinaman, intended to correct much popular misunderstanding; "More Rambles on the Midway" is a continuation of the illustrated Midwinter Fair articles.

LITTELL'S LIVING AGE.—A question of some moment to the busy man and woman of to-day is, how one may obtain a maximum of the choicest, most valuable reading matter at a minimum of outlay? An acquaintance with *Littell's Living Age* enables one to answer without hesitation, for it is a magazine exactly suited to their need. Fresh, entertaining, instructive, paying weekly visits, convenient in size, clearly printed, and replete with the choicest gleanings of the foreign literary field, it is the ideal magazine for the families of culture and intelligence. It needs to be but known to be prized as one of the best educational influences which can be introduced into the home.

The contents of recent issues well maintain the high average which characterizes its weekly appearance. It is published by Littell & Co., Boston, at $8.00 a year. A specimen copy may be obtained for 15 cts.

Effective Germicide.—

It is said that a seven-per-cent. solution of acetic acid [we would prefer the glacial—ED.] is a more effective germicide than mercury bichloride.

Therapeutic Brevities.

The Valerianate of Amyl.—Doctor Blanc recalls the fact that from time immemorial cider has been believed to have a beneficial effect upon gravel. The amyl-valerianic ether, which is made by distillation and is found mixed with alcohol in cider-brandy, is a mixture of the valerianate and butyrate. The former possesses a marked solvent action upon cholesterin. It is a colorless, mobile liquid of ethereal odor, disagreeable when inhaled in quantity, very sweet, and identical in odor with that of the russet apple. Its general physiological action recalls that of ether; it produces a lively general excitement and a slight intoxication, with acceleration of the pulse, warmth of the skin, sweating, general agitation, and then a tendency to sleep. If absorbed by the respiratory tract, it produces anæsthesia like ether. Its principal use is in hepatic colic, where its stimulant and at the same time its anæsthetic properties, to which may be added its power to dissolve cholesterin, make it very valuable. It is less prompt than perhaps the ether in Durand's mixture, but it appears to be more lasting and more certain as a preventive. It can be agreeably used in capsules. In cases of dyspepsia, by no means uncommon in connection with hepatic disease, it may produce vomiting; in this case ether may be used at the start, or an injection of morphine may be administered. Later the Valerianate of Amyl may be given in two-and-one-half-grain capsules every quarter- or half hour until the crisis is past. The drug does not act by exciting the secretion of bile, but by terminating the painful spasm of the duct by the anæsthesia which it then produces to a greater or less degree, and by enterlng into the circulation prevents the concretion of cholesterin in crystals. In nephritic colics it acts only as an antispasmodic and general stimulant without affecting the calculus itself, although it benefits the accompanying cystitis. Nervous troubles, gastralgic crises, colics of reflex origin (cold), intercostal neuralgias, muscular rheumatism, have been benefited. Menstrual colics are relieved and even the flow increased; and in this respect it is superior to apiol, especially as being less excitant. The dyspnœa, even of angina pectoris, diminishes under its use. In hysteria it calms the convulsive manifestations, the hyperæsthesias and the neuralgias; it benefits the contractures. In alcoholic delirium it appears to have been used with success, acting better than morphine. It is very feebly poisonous; five or six capsules per day of the above-mentioned dose can be safely taken. To avoid gastric symptoms it is well to previously purge the patient, and if the treatment is to be of considerable duration a milk diet may be prescribed.—*Revue de Thérapeutique Medico-Ghirurgical.*

Dangers of Pilocarpine.—Reiny, in the *British Medical Journal*, relates a case of white atrophy of the optic nerves in which Pilocarpine had been ordered for subcutaneous injection. The effect was most alarming, but treatment was continued, and the number of injections was increased. Finally, shortly after an injection the patient fell back dead. In another case Pilocarpine was given subcutaneously to hasten recovery from a cerebral embolism. After its use the patient was seized with a series of epileptic attacks, which passed off when the drug was discontinued.

Other cases have come to light of dangerous symptoms following the subcutaneous use of Pilocarpine.

Treatment of Impotency.—In cases of impotence from masturbation, accompanied with spermatorrhœa, are found morbid changes in the vesiculæ seminales, ejaculatory ducts, bulbous portion of the urethra, and prostate gland. Such cases frequently require surgical and special treatment, but I have found much advantage to result from electricity and the free use of Damiana. These agents possess tonic power over the nervous apparatus generally, and act most favorably upon the nerve centres presiding over the functions of the genito-urinary organs.—Doctor John J. Caldwell, in *Virginia Medical Monthly.*

Injection of Glycerin in Uterine Inertia.—Doctor Pelzer warns against the use of intrauterine injections of Glycerin for the purpose of stimulating uterine contractions, as they are liable to cause violent pains, to increase depression, and to develop methemoglobinuria.

Removal of Excessive Granulations.—Doctor Keen says the best remedy for removal of "proud flesh" in a healing wound is chromic acid, ten grains to the ounce, applied two or three times.

Epistaxis.—The fluid extract of the *Geranium maculatum* will control nose-bleed, bleeding from a tooth, or other local hæmorrages, if applied directly.—*Medical Times.*

Medical Progress.

FERRATIN.—If animal or vegetable albumens be heated to the boiling-point, coagulation will not occur, but so-called alkaline albuminates will be formed. Addition of acids to solutions of the latter will precipitate an acid albuminate. This, again, combines with bases to form soluble or insoluble albuminates. If a neutral solution of potassium albuminate be combined with a neutral iron oxide, a precipitate of an albuminate of iron is formed. The latter is a compound of iron and acid albumen, which is soluble in alkaline solutions. In such solutions ammonium sulphide will immediately produce an intensely black discoloration. If, however, the alkaline solution of iron albuminate be subjected to moderate heat for a prolonged period, it gradually assumes a dark-brown color, and if ammonium sulphide be added to this solution the color change will appear only after the lapse of several minutes, gradually deepening from a light into a very dark shade, such as was produced immediately before the solution was subjected to heat. The new compound of iron can be precipitated, by the addition of dilute acids, from its solution in the form of a brown, flocculent mass, which is readily soluble in alkaline fluids. Such solutions, again, react very slowly to ammonium sulphide. Now, at last, we have secured an albuminate of iron which is not a simple albuminate, but a peculiar ferruginous acid-albumen, which may be termed a ferric-acid albuminate. Like hæmatogen, it is distinguished from the simple albuminates by its conduct toward ammonium sulphide, and may also be regarded as an organic compound of iron. Electrolysis furnishes further proof of close union between the iron in the compound and albumen. In solutions of the simple albuminate of iron the iron is attracted to the negative electrode, while in solutions of this new compound only hydrogen is developed at the negative electrode. By heating iron with egg albumen at a temperature at which albumen does not coagulate, we may also obtain an albuminate of iron which does not react rapidly to ammonium sulphide. This, however, differs very markedly from acid albuminate of iron, in that, like albumen, it coagulates if subjected to heat.

We can justly assume from these experiments and observations that such an iron acid albuminate is found in our food from the animal kingdom; and this Schmiedeberg demonstrated. Chopping pigs' livers into minute particles and stirring with three to four volumes of water, a magma was formed which was gradually heated to the boiling-point and maintained at this temperature for a few moments. By filtration he obtained a clear, yellow fluid, from which, after cooling, a flocculent precipitate was obtained by the addition of a small quantity of a solution of tartaric acid. This proved to be an acid albuminate of iron. When dried it appears as a light-brown mass, containing about 6 per cent. of iron, and is readily soluble in alkaline solutions. It is very resistant to ammonium sulphide. No other compound of iron could be detected in the liver substance.

Since, as a rule, the food which we ingest has been subjected to heat during the process of its preparation, and since in the above process no other force but heat has been employed, we undoubtedly secure in this compound that form of iron which enters the stomach with animal food, and which is in part absorbed and deposited in the various organs. Ferratin is the acid albuminate of iron which is the result of the union of iron with acid albumen under the prolonged action of moderate heat. By the administration of Ferratin we are enabled to introduce into the organism in a methodical manner, for the furtherance of nutrition and growth or for the relief of abnormal conditions, the iron compound which, under existing conditions, is insufficiently supplied by the food.

It is obviously not practicable to obtain a supply of Ferratin from pigs' livers, since each yields not more than 5.0 to 6.0 grammes. Schmiedeberg's next move was to prepare it artificially. The methods employed, as narrated above, yielded a substance which differed in its conduct somewhat from the natural Ferratin, although in the main they were alike. There was a decided difference in the solubility of the two preparations, the artificial Ferratin being dissolved very slowly in alkaline fluids, when compared with the natural product. Experiments to ascertain the cause were next entered into. It was found that the acid-albumens resulting from the heating of albumens in alkaline solutions yielded slimy solutions. This characteristic consistence is altered by further boiling, a perfect fluid being formed, from which a second form of acid-albumen can be secured, which differs from the first in that, after drying, it is more soluble in water. Ferratin which is formed by the union of iron and this second form of acid-albumen has the same chemical and physical construction as the natural Ferratin. Like the latter, it is a dark-brown mass, readily pulverized into a rusty-colored powder, soluble in mild am-

moniated or alkaline solutions to form perfectly clear and not slimy solutions.

The physiological and therapeutic importance of Ferratin is based upon the fact that, after absorption, it is immediately available, while other compounds of iron, including the simple albuminates, must first be changed into Ferratin in order to become active agents.

Schmiedeberg placed Ferratin into the hands of Marfori for the purpose of investigating its physiological conduct in the organism and determining its therapeutic value. In order to test its absorbability Marfori subjected a number of dogs to the starvation process. This required a number of days, during which, in order to secure an absolutely empty digestive tract, the animals were repeatedly purged. For a period of two days they received 0.12 to 0.43 gramme of iron in the form of Ferratin. Analysis of the fæces and contents of the gastro-intestinal tract of the dogs, as obtained post-mortem, failed to account for 0.053 to 0.090 gramme, thus demonstrating that 13 to 44 per cent. of the quantity administered had been assimilated. This is certainly a remarkable result when compared with those obtained in trials with the other preparations of iron. That the Ferratin which is deposited in the liver is in reality the reserve iron for blood-formation, was demonstrated by a series of experiments, in which, by feeding with food poor in iron and repeated abstraction of blood, the amount of iron in the liver was markedly diminished or caused to disappear entirely. If sections of the livers of dogs that have received the usual amount of meat diet be placed in dilute solutions of ammonium sulphide, they gradually assume a dark brown or black color, due to the formation of iron sulphide. The same result is obtained if to an animal in which the supply of iron has been diminished Ferratin be regularly administered. If, however, by the method indicated above the reserve iron in the liver be caused to disappear entirely, no food containing iron ingested, but Ferratin given, no discoloration will be observed if the liver tissue be subjected to the ammonium-sulphide test. The blood having retained its normal status as far as the quantity of iron is concerned, the conclusion can be naturally arrived at that the Ferratin was employed in the formation of blood, instead of being stored up in the liver as reserve matter.

In contrast to other iron compounds, which after prolonged use are frequently the source of gastric disturbances, Ferratin may be taken by man for weeks without causing any disturbances on the part of the stomach or intestinal tract. Its conduct as regards elimination by way of the kidney differs also from that of the ordinary iron compounds. If mild solutions of the latter be injected directly into the blood current, a small quantity of iron can be detected in the urine within a very short time. The iron of Ferratin, however, is, under no circumstances, to be found in the urine. This proves positively that in the organism Ferratin is not changed into another form of iron, a part of which may be eliminated by the kidneys. It therefore remains unaltered.

From the foregoing we may conclude that Ferratin is a compound of iron which, under normal conditions, is ingested with the food, is assimilated in small amount more or less rapidly, and then deposited in the various tissues, especially in the liver. Here it serves as reserve matter, especially for blood-formation. The indications for its use are readily defined, since its practical application is vouched for by the demonstration of its physiological importance.

The ordinary forms of iron, which have hitherto been administered, are not absorbed, and hence are worthless because of the changes which they undergo in combination with the hydrochloric acid in the stomach and the sulphuretted hydrogen in the intestinal tract. A distinguishing feature of Ferratin is its antagonism to ammonium sulphide, thereby showing its resistance to the action of such agents as H_2S. It is not, like the ordinary compounds of iron, including the simple albuminates, changed rapidly into a sulphide, but is in great part absorbed unchanged; the organism receives the necessary amount of iron in the form in which it is contained in food. We must naturally conclude that Ferratin cannot be supplanted by any other form of iron.

About six weeks ago I received twenty-five grammes of Ferratin.* In two cases of anæmia following *la grippe* its exhibition was followed by results that demonstrated, in a most striking manner, the power of the remedy as a ferruginous tonic. The rapid change from the abnormal to the normal condition warranted the establishment of confidence in Ferratin.—Doctor G. A. Fackler, before the Cincinnati Academy of Medicine.

Evidences of Commencing Pericardial Effusion.—In opposition to the almost universally accepted teaching that commencing pericarditis is first manifested by an increase (broadening) of the cardiac dullness at the base of the heart, Ebstein finds that the

* Marketed by Parke, Davis & Co.—Ed.

primary alteration occurs in the lower regions of the area of dullness. At first there is a stretching of the pericardium toward the left side, but this is seldom discoverable, partly on account of the occurrence simultaneously of left pleurisy, partly because of the overlying of the cardiac apex by the lung, and partly owing to the loud tympanitic note in the semilunar space. After a short time the pericardial sac will be distended toward the right side also; and this enlargement may be recognized clinically in nearly every case by the appearance of an absolute or almost absolute dullness in the fifth right intercostal space, in the region named by Ebstein the cardio-hepatic angle (Herzleberwinkel). This absolute dullness in the cardio-hepatic angle is of importance for the differential diagnosis between pure hypertrophy of the heart and accumulation of the fluid in the pericardium, because, in so far as has hitherto been ascertained, absolute heart dullness between the fifth and sixth ribs, even in extreme hypertrophy of the right heart, does not extend beyond the right sternal margin. The cardio-hepatic angle marks also the spot at which, during the retrogression of pericardial effusions, the dullness remains longest observable. A series of clinical histories serves as a proof of the above propositions.—*Virchow's Archives.*

SPONTANEOUS CURE OF CANCER.—At a meeting in January of the Imperial-Royal Society, Vienna, an interesting discussion took place on the spontaneous cure of cancer. Billroth cited the case of a woman, æt. 50, who was affected seven years previously with a mammary carcinoma, the size of an apple, which underwent a process of mummification and was eliminated; to-day there remains only a white cicatrix around the site of the disease. He had seen a number of cases in which tumors, with the exception of sarcoma, ended in a similar manner.

Doctor Stoerk mentioned a case of epithelioma of the tonsil which disappeared spontaneously. A year after, however, a relapse took place which necessitated the resection of the maxilla. Professor Kaposi remarked that the cicatrization of the cutaneous epithelioma is not infrequently observed by dermatologists.

Ten years ago, an old lady living in France suffered from cutaneous epithelioma of the cheek, close to the eyelid; it was of slow growth, had a tendency to increase both in surface and depth, and for a few weeks it bled freely. With the application of very hot water several times daily, the tumor entirely disappeared in a couple of months, with the exception of a very small scab. The treatment was discontinued, and the ulceration returned, but shortly after its resumption she was permanently cured.—*Medical Times.*

THE CHOLERA MICROBE.—In a paper which has just appeared in the official volume issued by the Imperial Department of Public Health in Berlin, Doctor Dunbar describes a large number of special investigations which he made last summer and autumn on the presence of cholera microbes in the River Elbe, near Hamburg, and several other rivers. Over eight hundred samples were examined of the Elbe water alone, and microbes resembling the cholera bacillus were found constantly present both in the raw river-water and the town supply up to the beginning of November, after which they completely disappeared. But Doctor Dunbar traced them nearly a month later in the mud at the bottom of the river, and he suggests that they remained dormant in these surroundings, ready at the first favorable opportunity to reassert themselves and invade the stream itself. On this assumption no fresh importation of cholera virus is required to start an epidemic, only suitable conditions favoring the growth and multiplication of the microbes already present in the water.—*Food and Sanitation.*

DILATATION OF CERVIX FOR DYSMENORRHŒA.—Where the cervix is small and elastic, Pond recommends the use of a light Palmer dilator, one or more times, without anæsthesia; it should be carried to the full expansion of the blades, and applications made to the canal, or a strip of iodoform gauze introduced.

Where the cervix is long, conical, non-elastic, and cartilaginous, he recommends free division of the stricture on two or more sides, from the internal to the external os, with thorough dilatation, and the introduction of a stem to be worn ten to fourteen days, or longer, if necessary; following this the cervix should be dilated once or twice a month to avoid subsequent contraction.—Very long cervices require amputation.

In cases of flexion where, at times, it seems impossible to pass the light dilator, the Elliot repositor should be used, the organ carried into retroflexion, when the dilator can be easily passed beyond the angle of flexure. Should the cervix be dense, a heavier instrument may be used, and if this fail incision and the stem are resorted to.

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Original Articles.

SYMPHYSIOTOMY.*

BY W. P. MANTON, M.D.

"The more Cæsarean sections I have made within the last years—in spite of the good results to mother and child—the less satisfied have I been with the operation."—G. LEOPOLD, in *Centralblatt für Gynäkologie*, No. 30, 1892.

The subject which has been assigned me in the discussion of obstetric operations where the pelvis is contracted, is one with which it is somewhat difficult to deal—first, because, on account of the comparatively recent revival of the procedure, no exact conclusions have as yet been arrived at regarding the proper limits of the operation; and second, because of the widely scattered literature relating to its results.

The United States, Canada and South America have furnished a few cases, Great Britain a lesser number, Germany, Austria and Russia more, and Italy most of all.

Although the first pubic section was undertaken in 1644 by Jean Claude de la Courvée, it attracted no attention until 1768, when Jean René Sigault again suggested the feasibility of such a procedure for widening the pelvic space in cases of contraction. The operation was not, however, attempted by him until nine years later, 1777, when it was successfully performed on a woman having an extremely narrow conjugate. The great fatality which attended subsequent operations of this nature, and the miserable condition in which the women who survived it were left, soon brought the procedure into disrepute and turned its most enthusiastic advocates into bitterest opponents. Sigault himself, although the recipient of a medal from the Paris Academy, a pension from the Crown, and lauded alike by the profession and the people for his discovery—which at the moment was supposed to be a successful substitute for the dreaded and exceedingly fatal Cæsarean section,—was finally obliged to abandon the operation as too uncertain in its results and too hazardous in its execution. Thus symphysiotomy became stricken from the list of obstetric operations, and would again have been lost sight of entirely had it not been for certain Italian operators, who saw for it a legitimate field in those cases where the pelvis is too greatly contracted for successful application of the forceps, but where the deformity is too slight to honestly warrant the dangers of the Cæsarean operation, thus leaving as the only alternative the destruction of the living child *in utero*.

Glancing backward over the pages of history, it is easy to understand from our present standpoint of knowledge, that the failure of symphysiotomy to establish a foothold from the first as a legitimate operation was due, not to the seriousness or difficulty of the procedure, but because of a lack of appreciation on the part of its originator and his adherents as to the circumstances and conditions under which it is admissible. In studying the literature of the subject for the past few years, however, one is greatly impressed by the painstaking scrutiny and thorough examination to which this operation has been subjected by modern observers.

The obstetrician of this latter half of the nineteenth century takes nothing for granted, but, having proved all things, holds fast to that which is good.

Symphysiotomy, having now been tried by the fire of critical investigation, has stood the test, and, in the words of Garrigues, "has come to stay."

In the consideration of an operation which may involve serious if not fatal consequences to both mother and child, a considerable number of factors bearing upon the condition for which it is undertaken must necessarily

*Transactions Michigan State Medical Society, Lansing, May 3d and 4th, 1894.

be dealt with, before conclusious of any value or permanency can be arrived at.

With symphysiotomy this is particularly the case, since it is destined to occupy a middle place between the forceps and Cæsarean section, and to supplant, in the instance of the living child, the destruction of the fœtus by either embryotomy or craniotomy.

The opposition to symphysiotomy by the older, and some modern, obstetricians, arose from a misconception regarding the limits of the operation, and an ignorance of the capabilities of the living pelvis. The original operation by Sigault was undertaken on a woman with a pelvis having a true conjugate of 6.5 cm. (2½ inches), besides being otherwise deformed—conditions clearly demanding Cæsarean section,—but, as a substitute for the latter operation, the former was supposed, at that time, to be admissible in any degree of pelvic contraction. Again, in the various experiments conducted with a view to determining the degree of separation of the pubic bones which could take place without injury to the sacro-iliac joints, the cadavers of non-pregnant women, or, in a few instances, of pregnant or puerperal women dying just before or after delivery, were utilized. In the first instance the softening and increased elasticity of the joint cartilages and ligaments incident to the gravid state was either unknown or lost sight of, and, in the second, no account was made of possible post-mortem changes. With opinions based on such evidence, it is no wonder that even such careful observers as Baudelocque and Credé—and there were many others whose investigations led to the same results—concluded that the increase of the pelvic diameters was much too insignificant to warrant the great risks incident to the operation.

But recent investigations have shown that these fears were ill-grounded, and that while *all the diameters of the pelvis*, particularly the diagonal conjugate, are increased by symphysiotomy, a very considerable separation (6 to 9 cm.) of the pubic bones may take place without rupture of the sacro-iliac joints.

As the result of some very carefully conducted experiments on three puerperal pelves immediately after death, Biermer found that the increase in the pelvic diameters after pubic section was as follows:

	Cv.	Tr.	Obliq.
1 cm. separation.	0.25	0.75	0.50 cm.
2 " "	0.25	1.00	0.75 "
3 " "	0.50	1.50	1.10 "
4 " "	0.65	2.00	1.75 "
5 " "	0.83	2.25	2.20 "
6 " "	1.10	3.00	2.90 "
7 " "	1.40	3.10	3.50 "

These figures agree in the main with, but are a little less than, those obtained by Wehle and some other observers.

But it must not be forgotten that these measurements were made on the dead pelvis, and that while division of the symphysis of the corpse gives rise to a separation of the bones of but one centimeter, in the living a spontaneous gaping of three centimeters takes place. (Wehle.)

Wehle also found that besides the lateral motion of the innominate bones following division of the symphysis, a sinking downward also takes place as the result of a rotation of the sacro-iliac joints on an oblique axis from above downwards and from below upwards—a circumstance which Ahlfeld considers of great importance in the increase of the space at the pelvic inlet.

Perhaps sufficient evidence has already been adduced to demonstrate that the operation of symphysiotomy has, as Harris puts it, "a philosophical basis," but before dismissing this portion of the subject I desire to call attention to one other point of which much has been made by the opponents of the operation, namely, ossification of the pubic articulation. The investigations of Wehle, already mentioned, conclusively prove that ossification of this joint is of comparatively rare occurence, even as the result of age, since of ten pelves from women of sixty years of age and over, in not one had this taken place. But this author made the important discovery that the pubic joint is not always where it is supposed to be, for in sixty pelves examined it was found in the median line in only eight instances, being to the left in forty, and to the right in twelve—a fact which may account for the difficulties experienced by certain operators during division of the pubes, and attributed to ossification of this joint.

INDICATIONS FOR SYMPHYSIOTOMY.—In general it may be stated that the indications for symphysiotomy begin in those cases of pelvic deformity where the forceps are incapable of

delivering the head of the living child, but where a slight augmentation of the pelvic diameters would render such delivery possible—that is to say, in flattened or contracted pelves having a true conjugate of not less than 67 mm., or 2⅝ inches (Morasini). The determination of these pelvic conditions demands a greater accuracy in pelvimetry than has hitherto obtained, for when we consider that upon an accurate knowledge of the measurements of the parturient basin depends our ability to elect one or the other of the operations which are to-day before us for discussion—procedures which in the one instance invariably mean destruction of the child, and in another possible death to both mother and child—the importance and necessity of a correct knowledge of the conditions at hand become at once apparent.

The mother should also be free from infection, and the heart tone of the child good.

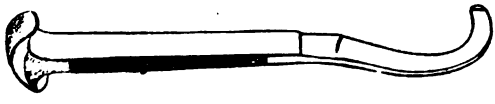
Before beginning the operation it is important that the os uteri should be fully dilated, or nearly so and dilatable. In many instances it may be necessary to artificially produce dilatation by means of Barnes bags or the balloon of Champetier de Rives as a preliminary to the pubic section.

Technique of Symphysiotomy.—The preparatory treatment of the patient is the same as for abdominal section. The bowels are washed out, the vagina douched with bichloride solution, the mons veneris and upper portion of the labia majora shaved, and the abdomen and vulva thoroughly scrubbed with soap and water and an antiseptic lotion.

The patient is then placed on the back with the legs either extended, allowed to fall over the edge of the table, or flexed over the abdomen. As the latter position is the one which must be assumed later on, there can be no reason why it should not be selected at the beginning of the operation. The operator, standing between the legs of the patient, then begins the incision just above the pubic margin and carries it well downward to the clitoris. At this point it is usually the custom to deviate the cut slightly to one side, in order to avoid that organ, but Kelly states the median incision is less bloody and therefore to be chosen. After severing the tissues down to the joint, the insertions of the recti muscles must be either pushed aside with the handle of the scalpel, or divided with the scissors, and the finger carried down through the wound to loosen the perivesical tissues from the bone. A sound is then introduced into the bladder, and the urethra carried to one side out of the way to avoid injury. The symphysis is now divided, two assistants meanwhile making counter-pressure against the sides of the pelvis.

The instrument used for dividing the pubic cartilage varies with different operators. By

Galbiati Knife.



Harris Knife.

most the *falcetta* of Galbiati is employed, while others prefer a rather stout probe-pointed bistoury. Gigli made use of a roughened steel wire for this purpose, and a metacarpal saw and the chain saw have also been pressed into service. Under guidance of the finger behind the pubes, the exact position of the cartilage having been determined, the knife is passed behind the symphysis and the joint divided from within outward, and below upward. The finger is generally sufficient to guard the soft parts from injury during this procedure, but the use of a curved director along which to guide the knife has been advocated, and Pinard has employed a plate of lead behind the symphysis to protect the underlying structures.

The question as to whether the subpubic ligament shall be divided or not along with the cartilage is still under discussion. My studies of the literature of the subject show that in the larger proportion of cases this has either been done or the ligament has ruptured during the delivery of the child. Wehle, however, is opposed to it, and in this he is warmly supported by Leopold. It is probably necessary in the majority of cases. As soon as the subpubic ligament has been severed, the pubic bones separate to about 3 cm.—a space which is further increased up to 7 cm. or even more during

the passage of the child. In many of the cases reported a profuse hæmorrhage has followed division of the *ligamentum arcuatum*. This was evidently due, either to a direct laceration of the venous plexus about the neck of the bladder, or to the tearing apart of the corpora cavernosa clitoridis. In order to avoid this latter accident, Zweifel has proposed tying off these bodies in two places, and dividing the tissues between.

As soon as the section of the symphysis has been accomplished, the wound is packed with antiseptic gauze, and the operator then turns his attention to the second step of the procedure, the delivery of the child. The Italians maintain that the best results follow from leaving the expulsion of the fœtus to Nature, but as this is only possible in a well conducted hospital, and as even in such the prolonged waiting is not always desirable, one of two methods must be employed, and the child delivered either by version and extraction or by the forceps. Version in this, as in all other instances, is a more serious procedure for the mother, and especially for the child, than the forceps operation, so that when possible the latter should be selected in preference to the former. Indeed, when the pelvic end of the child is the presenting part, and the membranes have not yet ruptured, external version should be attempted before the pubic operation is initiated.

As a rule the fœtal head which, before the separation of the symphysis, had refused to enter the pelvis, now readily engages, and slow, steady tractions by the forceps, aided by external pressure over the head, soon effect the delivery.

During the extraction of the child, pressure should be made on the side of the pelvis in order to prevent as much as possible all extra strain on the sacro-iliac ligaments. The ends of the pubic bones are brought in apposition in the same manner.

All bleeding vessels that can be seized with the artery forceps are now tied, or, if too deep to permit of this, secured by passing a needle threaded with silk through the tissues and thus surrounding the point from which the hæmorrhage comes. The muscles, fascia and skin are then brought together by deep and superficial interrupted sutures of silk or silkworm-gut, and a piece of iodoform gauze is introduced into the lower end of the wound for drainage. The wound is then cleansed with an antiseptic wash, and the ordinary dressings used in abdominal surgery applied.

In order that the pelvis may be immobilized during the healing process, a great variety of belts and bandages have been devised, but broad strips of adhesive plaster long enough to extend from one trochanter to the other would seem to be all that is necessary. Over these a binder of stout muslin, wide enough to reach from the hips well down onto the thighs, should be securely pinned, and a second binder of canvas, over this, will add to the security of the parts.

Suturing of the ends of the bones, which has been tried in a few instances, does not seem to add to the successful issue of the case, and even the stitching of the tissues and fascia in front of the pubes appears quite unnecessary.

The knees of the patient should be loosely tied, in order that undue separation of the legs may be avoided. When possible the patient is allowed to void the urine herself.

In those cases where it becomes necessary to make use of the vaginal douche, the patient may be slightly raised in order that the bed-pan can be slipped under the hips, and the legs sufficiently separated to permit the introduction of the syringe nozzle.

In cases which pursue a normal course, there is little pain following the operation, and the patient is able to leave her bed in from two to four weeks without the slightest lameness or interference with the gait. Caruso reports cases as able to get up on the eighth or ninth day, but in this country, where the normal puerperium is generally looked upon as covering the first month post-partum, a much longer stay in bed would certainly seem advisable.

ACCIDENTS AND COMPLICATIONS.—In many of the earlier operations, and in some of the modern, grave lesions of the parturient tract have occurred during the delivery of the child. Thus, tears of the cervix uteri extending up into the body wall, lacerations of the vagina, perineum and urethra, and vesico-vaginal fistulæ have been noted. Where the patient has escaped these more serious accidents, incontinence of urine has sometimes

proved a most harassing feature during convalescence. A too rapid delivery with the forceps, or a lack of care during the division of the symphysis, has, in most instances, been the cause of these complications. According to Caruso, where these or a fatal issue follows symphysiotomy, the fault lies with the operator and not with the operation.

RESULTS.—While the older operations were exceedingly fatal, the more recent statistics collected by Harris show a rapidly decreasing mortality rate both for mother and child in all parts of the world. This is due to increased experience and familiarity with the operation, and improvements in technique, as well as to a better understanding of the limits of pubic section. Of twenty-seven operations during 1893 done in the United States, and thirteen in South America, making a total of forty for this hemisphere, four women and nine children perished—a maternal mortality of 10 per cent.

Since the above report by Harris, however, a number of successful operations have been done in this country, and both the maternal and the fœtal death-rates have undoubtedly been considerably reduced.

CONCLUSIONS.—I present the following conclusions as suggestions for your discussion of symphysiotomy:

1. Symphysiotomy is an entirely feasible operation, capable of great results.

2. As a reliable substitute for craniotomy and embryotomy on the living child it should entirely displace these procedures in obstetric surgery.

3. That as, in the majority of cases of Cæsarean section reported, the true conjugate of the pelvis has rarely been below 67 mm. (2½ inches)—a conjugate with which in the flattened, the contracted, and perhaps in other conditions of pelvic deformity yet to be determined, symphysiotomy in skillful hands is entirely able to deal, with prospectively good results for both mother and child, the former operation should be limited to those cases having a shorter diameter than that stated.

4. But that, with our present knowledge of symphysiotomy and Cæsarean section, no hard and fast lines regulating the two operations are possible.

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NASAL REFLEXES.

BY J. A. THOMSON, M.D.

Reflex symptoms due to disease in the nose are very common, and of great importance on account of the difficulty in diagnosis they often cause. These disorders simulate other well defined diseases, with no symptoms, ordinarily, pointing to the direct cause. As a rule, it is only after the failure of the usual remedial treatment, sometimes after months of suffering on the part of the patient, that the real source of trouble is recognized.

A physiological reflex results in motion. The terminal filament of a sensory nerve is stimulated, and the resultant impression is reflected through a ganglion centre and transmitted through a motor nerve to a muscle, producing a contraction. The pathological reflex differs from the physiological, in that it may be manifested either as motion, sensation, or as a trophic disturbance. Pain elsewhere than at the diseased point, convulsive movements in remote muscles, or inflammation in associated organs, may be the result of a lesion in the nose reflected through a weak nerve-centre.

Only a small proportion of patients with nasal disease have reflex symptoms. Some other condition than the lesion there must act as a predisposing cause. This predisposing factor is the state of malnutrition known as neurasthenia.—This statement is open to the charge of great indefiniteness, but this indictment is against nervous, not nasal, pathology. All physicians know the train of symptoms that comprise our present knowledge of this weakness of the nervous system, but none, as yet, is able to trace it to any well defined lesion. Our knowledge is purely clinical.

The exciting causes in the nose itself, of reflex symptoms, are many. The most common is that condition of vaso-motor paresis of the turbinated bodies which precedes hypertrophic rhinitis. The alternating stenosis of the nostrils, symptomatic of this condition, is coincident with and the cause of many reflexes. In hypertrophic rhinitis, pressure symptoms in other organs are very common. Deformities of the septum nasi, where marked enough to touch the turbinated bodies, cause persistent reflex headache, cough, or other

evidences of disease referred to other organs than the nose. Nasal polypi, as well as all the rarer forms of nasal neoplasms, frequently excite disturbances in other organs.

Foreign bodies in the nose, like tumors, may act as an exciting cause of reflexes. The ulcers of syphilis or of tuberculosis are not infrequently the cause of pain, referred by the patient to other nerves and organs entirely distinct from the nose. The crusts which sometimes form in atrophic rhinitis so firmly that they cannot be removed for several days, cause reflex neuralgias or other symptoms, if the turbinated bodies have not undergone complete atrophy.

There are two conditions common to all the diseases given, which act as exciting causes of nasal reflexes. These are: First, that a region of the nose containing a turbinated body must be involved in the diseased process: Second, that of pressure on the sensitive nerves of these turbinated bodies.

Of the reflex diseases produced by nasal lesion, asthma was the first to be distinctly recognized. Voltolini published a case in 1872, where asthmatic attacks that had resisted all other treatment had been cured by the removal of nasal polypi. This report was followed, as not infrequentiy happens after a good original paper, by a flock of other case reports that had previously been withheld for fear their conclusions or observations might be ridiculed as improbable or unscientific. The number of cases reported since Voltolini's paper have been sufficient to establish the fact as thoroughly as any medical truth can be on purely clinical evidence, that nasal polypi or other forms of obstructive diseases in the nose are a frequent source of asthma. I have seen one well marked case that recovered entirely from the asthmatic attacks after the removal of nine polypi from the nostril; recurrence of the growths again brought on the asthmatic attacks, which were finally cured by a second operation, since which time the growths have not recurred. Nocturnal asthma, attacks of cough and dyspnœa coming on two or three hours after the patient has gone to sleep, are usually due to obstruction of the nose and can be cured, if not of too long standing, by restoring the normal lumen of the nostril. Following Voltolini's lead, Seiler published a paper giving the history of four cases of obstinate cough that had resisted all treatment, medicinal, hygienic and climatic, and were finally cured by the treatment of mild nasal disorders. I have seen a number of such cases, but they are too common to require description here.

Hack's monograph on nasal reflexes, published in 1882, is the source from which most of our present knowledge of these disorders is derived. He collected laboriously from the literature of medicine all the cases reported up to that time, and among the common disorders enumerated are dyspepsia and gastralgia. Nasal disease acts as a direct exciting cause of dyspepsia in this way: Nasal obstruction is followed by catarrh of the naso-pharynx; the secretions accumulating in the naso-pharynx decompose and become contaminated by pyogenic germs; this decomposed secretion with its attendant germs is necessarily swallowed at meal-time, and may be the direct exciting cause of dyspepsia. Aside from this direct source of gastric disease, nasal diseases sometimes act as reflex excitors of disease of the stomach. I have now under observation a patient who suffered from nausea, pain in the stomach, occasional vomiting, and all the other symptoms of grave disease of the digestive tract, for years. He was under the treatment of skilled and competent physicians three years to my knowledge. Finally his brother, a medical student, suggested that a badly obstructed nostril might be the source of the whole trouble. I concurred in this opinion and advised an operation for the purpose of opening the nostril, completely closed by spur growths that pressed upon and caused partial atrophy of the middle and inferior turbinated bodies. The patient thought the opinion ridiculous and continued for six months longer under general treatment, with no relief, but with constant aggravation of the symptoms. Finally, despairing of all other help, thinking there might possibly be a disturbing element in the nose, he came to me a second time for operation. The septum was so badly deflected and so covered by protuberances that six operations were required before the nostril was opened; but with every operation and partial relief from pressure on the turbinated bodies, the symp-

toms of stomach disorder, the headaches and neuralgias from which he suffered, improved. The case now gives every evidence of complete cure, without any constitutional treatment, by the removal of nasal obstructions and pressure from the turbinated bodies.

Cases of cardiac palpitation as reflex nasal disorders, without organic or functional disease of the heart, are very rare. I have seen one where any exertion, especially mental exertion, produced such violent palpitation of the heart, with resultant dyspnœa, that the patient was unable to follow his profession, that of attorney, and was obliged to seek some other method of earning a livelihood. Cauterization of the hypertrophied turbinated bodies in this case cured the nasal disease and, much to the surprise of the patient, the cardiac palpitation also. I had found it impossible to convince him in the early stages of his treatment that his heart was perfectly healthy, for physical examination showed absolutely no sign of disease of that organ.

Cases of acne rosacea often resist all treatment until the attendant or coincident nasal disease is cured, and in this way the superficial congestion is in part relieved. I have seen several such cases where the acne proved intractable in the hands of skilled physicians who gave no attention to the intra-nasal disorder, but where it was readily cured by treatment addressed only to the disease within the nose.

There have been a few cases of excessive salivation reported as the result of lesions in the nose. Fortunately they are very uncommon. On the other hand, neuralgias, either supra-orbital, parietal, occipital or in other organs, near or remote, are very common. The most marked case of this kind I have seen recently was that of a doctor from Indiana. For ten years he had suffered almost constantly from headache. Three days at least out of every month the pain was severe enough to compel him to keep his bed, and for a week after this acute attack he would go about his work, but be able to eat very little. After treating all other possible causes for this condition, he came to me in July last to have his nose examined. I removed a spur which was crowding on the inferior turbinated body. The headache disappeared within three days, and four months later he reported he had gained fifteen pounds in weight, felt stronger and better than for years past, and had not had a twinge of pain since the operation wound healed. Any number of similar cases could be reported.

Earache, toothache, and ciliary neuralgia have their origin almost as often in the nose as in the organs to which the pain is referred. Disorders of sight, such as double vision, falling bodies, specks, extreme sensibility to light, and other functional disturbances, are frequently due to nasal disease, when the eye itself is perfectly healthy. Recently four cases of exophthalmic goitre have been reported as cured by intra-nasal treatment, undertaken only for the relief of local disorders, without any intention or hope of benefiting the graver disease.

A peculiar form of mental disturbance, inability to fix the attention for any length of time on one subject, has been frequently traced to some nasal disorder. This mental condition I can best describe in the words of one of my own patients. He is a successful business man engaged in large ventures. He noticed he could not concentrate his attention for more than two or three minutes at a time on any topic, not even when discussing prospective business investments with his associates. In spite of himself his thoughts would wander to trivial things; he could only return mentally to the point whence his attention wandered, as he himself put it, by steering his thoughts around in a circle to where he left off when his mind began to wander. This condition he kept to himself for months, fearing it was a symptom of the beginning of insanity or of general paralysis of the insane. He spoke of it to me only after treatment of ordinary hypertrophic rhinitis had relieved him of frequent headache and this annoying mental weakness. This case was treated three years ago, and there has been no sign since that time of any recurrence of this or similar mental disorder.

Aphonia, without any laryngeal disease, is sometimes seen as a reflex disorder dependent on the nasal lesion.

Cases of chorea and epilepsy have been recorded by very competent observers, where

a cure has been brought about by treatment of some apparently trivial nasal disease.

Obstinate vertigo has also yielded to the skill of the rhinologist after every other form of treatment had been tried and abandoned as useless.

The diagnosis of these disorders is extremely difficult from the fact that the disease in the nose may show no connection with the resulting disorder that can be directly traced. Ordinarily, in reflex neuralgias, touching the diseased nasal area with a probe will aggravate the pain. Local anæsthesia by cocaine may relieve the headache. But these two tests frequently fail, and treatment must be resorted to before the question as to whether the symptom is a reflex or not can be decided. Sometimes, too, a diseased condition will exist in the nose, such as we would expect to result in a reflex disorder, and that disorder be present independent of the nasal disease. I have seen one extraordinary case of this kind that I think has never been reported. The woman suffered for two years from a continual headache. Careful treatment by her family physician afforded no relief. She was referred by him to a specialist in diseases of the nervous system, who used all known measures for the relief of her pain, for one year, without effect. She was then referred to me for examination of the nose. I found marked hypertrophy of both middle turbinated bodies, a condition frequently existing in reflex neuralgia. The removal of the hypertrophied tissue brought no relief. A short time after I had dismissed her, she died suddenly from rupture of the left ventricle. The post-mortem examination proved the case to be one of chronic granular nephritis with none of the ordinary symptoms. The urine had been repeatedly examined, chemically and microscopically, by all three of the physicians who in succession had had charge of the case, and no symptoms were found to indicate the real disease that caused the headache.

Where the condition enables the physician to recognize the disease as a reflex manifestation, the prognosis is good. One exception should be taken to this statement. In long-standing cases of epilepsy or asthma the nervous system may have become so diseased that the effect will continue after removal of the cause. In the other nasal reflexes the cure of the nasal disease usually means the cure of the reflex disorder. Nerve tonics, rest from business or family cares, and hygienic conditions of life, are the only measures needed, other than that demanded by the local condition in the nose.

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MORGAGNI AND THE ANATOMICAL CONCEPTION.*

BY RUDOLPH VIRCHOW.

The history of medicine, though always related in a manner to the progress of civilization in general, yet presents to the student a number of noteworthy peculiarities.

The first is an unbroken development of about twenty-five centuries. From Hippocrates to the present practitioners of medicine, the consciousness of this unbroken unity has never disappeared. While religions were changing, and systems of law were following one upon the other, the medical tradition was preserved. No other science has ever been so firmly established in its very beginnings, none is in reality so old as medicine.

So long a persistence of doctrine would scarcely have been possible if the nature of the object with which medicine concerns itself did not possess an integral element surviving all mutations of time and place, and which confronts each new generation with the same problem for investigation. This problem is disease. The special diseases are indeed dissimilar, according to time and place, but the question as to the true character of disease in general remains ever the same; so also, the task of the physician—to heal—never ceases, no matter where his effort is exerted, whether in Italy or Russia, in Europe or in America.

It is scarcely necessary to state that throughout antiquity, but one opportunity, and that for a brief period, was afforded the student to investigate the anatomy of the human subject. That period followed the death of Alexander, when the mastery of Egypt reverted to the Ptolemies. After this

*An address delivered before the Eleventh International Medical Congress at Rome.

dynasty no physician of antiquity received the same facilities for research. Thus Galen himself could recommend nothing better than that medical men make the most of their investigations with those animals which in his opinion were most nearly related to human beings—apes and swine. It is reasonable to suppose that the sacrifice of animals, whose selection presupposed a normal condition of the animals and their organs, prompted many a comparative observation, extending to pathology as well. Even the beasts of slaughter must have often furnished to careful observers material for comparison and reflection which could subsequently be applied to conditions of human disease, and beyond all doubt Hippocrates knew and utilized many facts which were securely established for the first time centuries later. It is obvious, however, that both anatomy and physiology must have continued in a precarious state so long as investigations on the human body had not yet supplied definite proof of the special relations prevailing between the individual parts.

The real obstacle was interposed by the church. The natural prejudice of the people against the dissection of the human corpse was strengthened by the ecclesiastical prohibition. Moreover, the need of dissection was not felt by those to whom Galen's infallibility was a matter of conviction. Why perform dissection when the structure of the body was known? By this species of argument that peculiar dilemma was brought about which resulted in retarding for two centuries the development of anatomy. To ascertain whether Galen was in error, dissection was indispensable—on this point science was peremptory; but the church declared that Galen had not erred, hence it was not necessary to resort to such reprehensible measures.

In this quandary the highest authority in the church could alone offer help, and the church finally decided in favor of science. Rome itself never lacked physicians who felt it their duty to bring about the recognition of truth in science, and not a few of the papal body physicians up to our own time have belonged to the most energetic leaders in this combat. Thus, at the beginning of the fourteenth century, Mondino of Bologna obtained permission to dissect and demonstrate to his students several human corpses. After the path had once been opened, it gradually became accessible to others. Thus the Italian universities enjoyed the profit of a valuable expansion in their medical curriculum at a time when the universities of most of the other countries were not so favored, and Italy possessed a body of anatomists when elsewhere such a specialty was not yet known. Then began the procession of medical students from northern lands to the Italian universities, particularly to Bologna and Padua. Occasionally, too, came an accomplished man seeking here to perfect his knowledge. Among the latter was that young *savant* who was destined by his own systematic researches to destroy forever the faith in Galen's infallibility, and be first to establish incontrovertibly, at least in the domain of anatomy, the rightfulness of the autopsy. Andreas Vesalius was born of a Low-German family in Belgium, and educated in France. But not till he became a professor in Padua (1537–1544) did he acquire the reputation which rendered it possible for him to become the true reformer of our knowledge and instruction respecting the foundations of medicine, and to conquer for the anatomy of all future times the rank of a fundamental science. Vesalius was one of those rare men, possessed of universal genius, such as history but seldom produces: Just as all the civilized nations of which Europe was then composed could see and reverence a kinsman in him, so likewise was his victory in the domain of anatomy recognized as applying of right to all other branches of medicine.

And yet it is not just to term him the Reformer of Medicine, as has been done. His anatomy, as such, was not capable of overcoming and dispelling the humoral pathology which then prevailed. Those very organs which were so familiar in respect to location, conjunction and equipment, were still persistently conceived of as composed of four humors! To transform this theory a direct charge was necessary upon the centre of the dogmatists' line of battle. This was done with all the impetuosity of a conqueror by a German who at heart despised anatomy and employed in its place the Arabian tradition, though in

greatly modified form—Theophrastus Paracelsus, a contemporary of Vesalius. Demonstrating the chemical untenability of the four humors, and their inadmissibility as elementary substances, he succeeded in building up, with the aid of Arabian admixtures, a species of counter-theory, half naturalistic, half spiritualistic, which in the hands of his followers unfortunately assumed a character in which the mystical predominated.

It is difficult to say what might have been begotten by this school of medicine, which was stripped indeed of all dogmatism but yet given over as prey to the most arbitrary subjective fancies. Salvation, however, was near at hand. At the beginning of the seventeenth century William Harvey established the theory of the circulation of the blood, and thus laid the cornerstone of a new science which soon rose into glorious companionship by the side of anatomy—viz., Physiology. When a young man, Harvey had also gone to Padua, primarily for the purpose of strengthening himself in anatomy. Under the guidance of Fabricius ab Aquapendente he had studied the arrangement of the blood-vessels and of the heart, and so indirectly, in lieu of the blood, he placed as the "noblest juice" of the four cardinal humors the real *humor cardinalis*, or blood.

His theory of the circulation exhibited one deficiency—a serious one: he was unable to prove how the blood passes from the arteries into the veins. To have furnished this proof by direct observation was again the achievement of an Italian investigator. The celebrated teacher at the University of Bologna, Maricho Malpighi, who applied the then recent invention of the microscope to the observation of the processes occurring in the living organism, discovered the capillary circulation. Thus was in a measure completed the great edifice, to whose erection Vesalius and Harvey and countless other *savants* had devoted their powers. Thus also was achieved the transformation of the humoral pathology into a hæmato-pathology, and a trend imparted to research, for whose modification and elaboration both of the succeeding centuries have labored, and which has not yet accomplished its final destiny.

Strangely enough, none of the investigators named ever reached the point of applying to pathology the results yielded by pure anatomy and by its perfection into experimental physiology. No one can constantly deal with anatomy and yet fail to observe the modifications produced by disease in the living organism. In truth, we know that from Eustachi to Vesalius, pathologico-anatomical deviations from the normal have attracted the attention of anatomists; but neither they nor their immediate successors reported these deviations with such care as to render possible the establishment of an actual science of pathology. On the contrary, the ancient conception that disease was something general became all the more firmly rooted, as the conviction gained ground that one liquid circulating throughout the body was the bearer and the centre of all substantial modifications. Even the comprehensive studies of the great teacher of Leyden, Hermann Boerhaave, whose pupils soon filled all the professors' chairs of Middle Europe, were not capable of overcoming the prevalence of this conception. They succeeded only in directing to the physician's attention the importance of the local process, but they finally culminated in referring back these local processes to local disturbances of circulation. Thus the circulation always remained in the foreground of pathological study, and the Paracelsian notion respecting the *vita propria* of the organs was cast aside as a spiritualistic aberration.

Morgagni was then in his youth. His star first led him into an environment which was less favorable to pathological than to anatomical studies. Let us dwell upon this fact for a moment. When in 1698 Morgagni, then scarcely sixteen years old, left the school of his native city Forli for the University of Bologna, he found himself translated, so to speak, into an anatomical atmosphere. Everyone was yet familiar with the discoveries made by Malpighi, Aranzi, Varoli. He soon entered into most intimate relations with Valsalva, participated in the anatomical investigations of his master, and was by the latter initiated into pathology and medical practice. As early as 1701 he gained his laurels in medicine and philosophy, and a few years later the presiding office of the *Academia Inquietorum* which was later converted

into the *Institute del Scienze.* In 1706 appeared his first notable, independent performance—the *Adversaria Anatomica Prima*—which was gradually followed by four further volumes. His reputation grew so rapidly that the Venetian Republic in 1711 called him to the chair in Padua which had been previously occupied by Vesalius, and here he was so active in his tutorial work that the number of his pupils could not be accommodated within the narrow space of his lecture hall.

Despite the international character of this Congress, I may venture to recall the extent to which Germany was represented among these pupils, and the peculiar intimacy which arose between the German pupils and the great master.

When Giambatista Morgagni closed his eyes forever on the 6th of December, 1771, at the ripe age of 89, he left to the world as the fruit of a long life of labor devoted to science, the five books entitled *De Sedibus et Caŭsis Morborum.* The new science which he summoned into life was not christened with the name which it afterwards received: Pathological Anatomy. But all were aware that these books contained the sum of all actual knowledge respecting the material modifications wrought by disease, acquired up to that time. The new observations of Valsalva and the far more numerous data gathered by Morgagni himself were here united with all the countless reports scattered through the particular volumes, the academic writings and the periodical contributions of all the Occidental countries. Morgagni had collected them all with anxious fidelity. Unlike the frequently uncritical and unreliable collections of former times, every single report was here controlled and traced back to its source, and then carefully reviewed, not simply for the purpose of establishing the anatomical data, but also in order to analyze and establish their relations to clinical processes and the principles by which diagnosis and prognosis should be governed. It was by no means a mere compilation and work of reference, like those of his predecessors Schenk von Grafenberg and Boneto; it was rather a methodological handbook. Furthermore, the purpose of the book was not alone the promotion of anatomy as a pure science, but in far greater measure its development into a fundamental aid to practical medicine. This enables us to understand why after Morgagni's time the clinic first assumed its true significance. In London and in Paris, in Vienna and in Berlin, the full consequences have been deduced from his preparatory labors. Hence we may say that by and through the labors of Morgagni was the dogmatism of the ancient school completely broken for the first time, and that the New Medicine dates its beginning from him.

Up to the time of Morgagni, considerations respecting the nature of the disease—or, as they preferred to term it, the essence or substance of the disease—stood in the foreground of every general or casuistic contemplation of disease or the diseased. They investigated the morbid processes, established the symptoms, sought to ascertain the modifications in the organism, gathered them all together into one disease tableau, and applied a definite name to the malady. Following this process of investigation, the majority of cases failed to reveal what was in reality the nature or essence of the disease. They then sought to obtain light theoretically and to formulate the result. In this endeavor, anatomical, clinical and ætiological points of view were in turn selected; and yet the disease-names chosen in accord with these varying points of view were treated as coördinate designations. If the local symptoms did not suffice, refuge was sought in some hypothesis, the most arbitrary assumptions being permitted and even looked upon as scientific. What did they leave undone in seeking to fathom the mystery of fever and inflammation! Is there essential fever? Is inflammation an integral concept? How various the answers given to these queries in the course of time!

Morgagni, who sought to study disease as an anatomist, did not regard the determination of its essence as the first task of the investigator. The title of his great work begins with the words: "De sedibus morborum." In truth, this accords with the proper succession of investigations which it behooves the physician in general and the pathological anatomist in particular to perform in individual cases. I am wont to condense all this in the question which I address to my

pupils: Ubi est morbus? Where is the disease? Thus the scientific path of investigation and the assumption of local process are indicated beforehand. For it is self-evident that such a question would be absurd if there were real universal diseases.

To discuss before so enlightened an audience the question of universal disease, would be an anachronism. If anyone present should still be harboring in some hidden fold of his gray matter the memory of universal diseases, he will soon find, on a little reflection, that a considerable—as a rule, a predominating—part of healthy life prevails in every sick organism, and that the morbid or even the dead embraces but a fraction of the body. With one who does not comprehend this, it is useless to talk of pathology in the sense of a natural science. It was the mission of pathological anatomy to demonstrate this conviction *ad oculos:* There is no morbid body, diseased in all its parts. Such is the meaning of the words "Sedes morbi," which embody the quintessence of Morgagni's experience.

But pathological anatomy is incapable of adducing a "sedes" for each disease. In the great domain of nervous diseases, and even in that of the poisons, there are numerous cases in which the anatomical investigation remains insufficient. Not because there are no "sedes morbi" in such instances, but rather for the reason that the disease has produced no visible modifications in the invaded parts. Anatomy, however, deals only with the visible. The findings of the pathological anatomist are not, therefore, equivalent to the conception of a seat for the disease. On the contrary, supported by our physiological and chemical knowledge, we deem ourselves warranted in speaking of a seat for disease in cases presenting no visible modifications.

This is what I term *the anatomical idea in medicine.* I maintain that no physician is capable of forming an orderly conception of a morbid process if he be unable to refer to it a definite place in the organism. "Ubi est morbus?" is the question with which the search of the living patient as well as of the dead body must begin; but if this investigation yields no actual result, it is far from ended: then begins the task of ascertaining by deduction from the totality of previous symptoms, particularly from the ætiological facts, where the disease is seated. In this view, the anatomical idea reaches far beyond the domain of pathological anatomy. It is no longer bound to the visible modifications rendered perceptible by the knife of the anatomist. It is rather joined to the vital function, and accordingly comprises a large fraction of what is now considered the field of the clinician.

This division of domain was not yet completed in Morgagni's time, and though he was more of an anatomist than a clinician, many a section of his great work is devoted chiefly to the clinic. This explains why so many of his followers have belonged to the clinical schools, and why he exerted so decisive an influence on the method of examining the sick.

Pharmacology as well as surgery has grown every year more localized—so much so that old Morgagni, if he were to arise among us, would probably be horrified by a method which is so in conflict with ancient traditions. And yet we should perhaps succeed in gaining absolution from him by convincing him that it is his own thought which celebrates such triumphs—a thought which he perhaps did not clearly elaborate, and whose final consequences he did not deduce, but which for the first time issued from his writings in all its power—the thought of "sedes morborum," or, as I have termed it, the anatomical idea.

It is this idea which dominates our present physiology and pathology. Trace it back, if you will, into the past, or replace it with another formula, it will assuredly remain the thought of the future. And this future will place the beginning of its epoch in the days of Morgagni. His be the honor!

SOME OF THE REASONS WHY NERVOUS DISORDERS MULTIPLY.

BY V. A. BAKER, M.D.

That nervous conditions and maladies of serious import, growing out of lack of nerve stamina, are on the increase, needs no argument to prove. It has been said American people live in an age of worry, push, too late hours, and overworked conditions of men and women generally. Admitting this as in

part causative compared to a few generations back, yet I assert it is not the main reason.

That our system of home management, of school discipline and general laxity has undergone great change since the days of our grandparents, goes without saying, and we are beginning to feel the change unfavorably, nervous disturbances keeping pace with the change.

Faulty—excessively faulty—mental, physical and moral training in childhood, with a physical expenditure incident thereto, is shockingly apparent; comparatively few young, as compared with the past, ever reach perfect manhood or womanhood under present systems of management, or rather, mismanagement. Mothers shirk the care of their infants—the nursing-bottle and artificial foods supersede the breast, Nature's supply; and it must be admitted that this is more a fashion than a necessity. Parties and evenings with friends, cards and debauches, late lunches, indigestible foods, strong coffee or tea, and kindred abominations, can be better served if the mother nourishes her young babe artificially. This mismanagement does not end with the wrong done the child; such treatment is pernicious to her future offspring and to herself. Lacteal secretion checked by such a course modifies mammary function in the future, and the female offspring of such mothers become breastless as generations come and go.—Sightless fish found in dark cavernous waters have no eyes because Nature shapes means to ends, furnishing nothing she has no use for. Mothers pursuing such a course impart tendencies and faultiness to their daughters.

A little later, when the young child is weaned, it is allowed—too often at least—almost its own way in the selection of food, disturbing and overdoing the digestive organs; many a victim of croup, of convulsions from gastro-intestinal irritation, of tuberculous deposits in the brain wraps, or of any of the several maladies that beset the young child, has its origin in this way; or, if it escape this, there is likely to be a lack of physical development, growing out of ignorance in the observance of the commonest laws bearing upon dietary, and mismanagement of the child.

This wrong of every-day life is more especially common to city than rural life. Children of poorer parents and of country mothers fare better, because they are more commonly nursed and have plainer food after weaning, and, withal, are clothed and aired in a more common-sense way; hence the percentage of mortality is less than in city life by from twenty to twenty-five per cent., according to statistics and observation. It is astonishing the degree of ignorance and seeming indifference that exists on this subject among physicians—and, under such circumstances, what can be expected of the laity and their relation to their offspring? If cholera, yellow fever, or any fatal epidemic is likely to get a start, boards of health with all the power law can give to aid in enforcing, often with rules most arbitrary, are brought into requisition—which in the main is right. Humane societies, too, are given authority by law to protect animals and prosecute those who inhumanly treat children; yet neither reform or law raises more than a faint wail to protect our young offspring by educating parents away from the disgraceful methods of dress, of bad feeding and bad ruling—lack of discipline being the rule, and healthy discipline the exception, in American homes of to-day.

Another mischievous source tending to nervous trouble that every physician recognizes, and that wrecks mentally and physically in many instances, is onanism, or self-abuse. Here, too, faulty education, or rather no education, is blamable. Parents should be educators—the father to the son, the mother to the daughter—in all that pertains to the welfare of youth; if, instead of practicing deception and exciting curiosity, as is now so much the custom in dealing with juvenile ignorance concerning sex, education were more open in this respect, it would be vastly better.

Oscar Chrisman, of Clark University, in an article in the *Forum* for February, 1894, entitled "Child Study," aptly says:

I reached the conclusion that a department of pedagogy in colleges and universities should include not only such work as the science of education, the history of education, school supervision and the like, but also all things pertaining to the child, such as are

studied by anthropologists, psychologists, and others.

He also states that this work should be carried on by scientists, and not by school officials in a haphazard way as is now done in our common schools, merely observing the letter with little of the spirit, as none can impart to others what he himself knows not. He adds:

I felt that the child is surely of as much importance as the plant, which has a department by itself (botany), or the animal, which has a department to itself (zoölogy). I thought that as long as the study of the child was regarded as an incident of several departments, he would never be properly studied.

He further states it out of order to embrace in pedagogy this science as relating to child life, and proposes the term Paidology, which literally rendered means "the science of the child." . . . "A pure science whose duty is to inquire into the life, the growth, the ideas, the very being of the child."—He employs the term "child" in the general sense covering the whole period from before birth to manhood. He would apply this to the home training as well as school training. Is there need for such special training—asks Professor Chrisman—since we have quite enough to engage the study of the young? "There's the rub." We have quite too much, for one-half of the instruction of our youth is valueless in after-life, and should be secondary merely and governed by capacity and adaptability instead of, as at present, being forced and crammed. Paidology should be thoroughly taught first. Of these subjects skimmed over, how much does the child know? In a brief period practically nothing, except that portion applying to everyday life and experience, and certainly experience with self is constant. Chrisman further inquires:

Suppose the years spent in study of Latin, Greek and trigonometry and what not, had been spent in child study (and child training), would we be so ignorant of the only object in life worth living for?

His idea, and a correct one, is that the name of foundation causes that throw so many boys and girls out of school and out of home, and that are useless in after-life, is *Legion*. Reflection from observation is convincing that the present method of managing the young at home and at school is deteriorating the race, physically and morally, in too many instances.

"The proper study of mankind is man." There is, so to speak, an immensity in man awaiting development—a cultivation from the cradle up to manhood—and we have no fear for the future if proper attention is given; but as it is going now we have much to fear. We seem secure in our ignorance! We see exhibitions of the little ones from four years up; they are pushed to the front by their parents, who, from mistaken notions of what constitutes good breeding, not only allow the child to be bold and disagreeable, but encourage it in so doing, with results that a little later crop out in selfishness, boorish ways, and often in downright viciousness. The education of quite too many is a street education, with an utter disregard of health and morals, and without even a thought of their relation to the future by the parents. This is the result of ignorance, of faulty preceding education. Really such ignorance is pitiable, but fortunately is remediable if we can institute a department in our educational system and revolutionize by creating sentiment at home. If the beginning is right, we may secure good citizenship and give our schools material worth polishing. Such foundation being once laid, the main cause of premature decay with all the concomitant train of nervous disturbance will die out.

Some of the causes of degeneracy traceable to faulty ways allowed the young, I believe should be reached and will be reached by wholesome legislation forbidding narcotics and stimulants to all minors. It is a shame and disgrace to our manhood the spectacle of youth smoking cigarettes, cigars, and even the pipe; and youthful depravity by such association is fostered, youth of a dozen years being often found in a state of intoxication. What a travesty on decency, what a reckless disregard for generations yet to be, when we consider the husbands and fathers such material will make! Anything, everything can be done for the future welfare of our nation, if we will lay the foundation aright in childhood. Everything that educates the head and heart of the young child aright is sure to benefit him in the future.

A Canadian law that forbids children under fourteen years of age to be on the streets alone after 8 P.M. might well be copied and enforced.

The medical profession can formulate methodically the proper physical culture to be a part of a discipline to stop the reckless expenditure of nervo-vital force in the young as encouraged, or at least allowed, in the majority of families. Precocity should be discouraged, and children kept in the background instead of being pushed to the front. Modesty, that quality that gives to the young a polish, and is a passport of excellence and worth, will take the place of the boldness and impudence that now characterize our national nursery.—Not because we do not care for our children, but rather because we are living in an age of mistaken ideas as relating to their welfare, through false notions of early discipline and its consequences. Intelligence, tempered by a proper code of morals early instilled, will diminish crime, lessen the distress of poverty, and make citizenship noble. The average parental training of children is tainted with the senseless, shameful folly of instilling superstitious ideas by repeating to them nursery rhymes and tales oft told, tending not only to educate them in notions of superstition, but to make them cowardly—all of which is a hamper to good sense in after-life.

A distinguished lady of wealth and influence, noted for model specimens of children, was asked by a friend and mother: "Why are my children sickly and croupy, and yours always free of such conditions?" The reply was: "You rear your children indoors, I mine out; yours are educated to be waited on by your servants, I discipline mine to wait upon themselves; my children are early to bed, you give parties for yours with late hours and allow them to parties and late hours from home fashionably dressed; my children have plain wholesome food adapted to their years, yours sweetmeats, rich and highly seasoned dishes, and are overfed generally; I teach mine to love nature and to feel there is nothing arrayed so finely as the lily of the field, the bees and the butterflies, that there is nothing so mean as a lie, nor anything so miserable as disobedience, that it is a disgrace to be sick, and that good health, good teeth and good temper come from plain food, proper clothing, plenty of sleep, and being good."

Teach the child that which it most will be benefited by when thrown upon its own resources, when responsibilities of managing the affairs of every-day life are being experienced. Suicide, home-desertion, tramping, and bad citizenship generally, are due to our shiftless, senseless want of proper method prevailing at the present time in the discipline of childhood. Adult life is too often begun with so little knowledge of its requirements and demands, that its responsibilities confuse and overwhelm the beginner who hopes to comport with the surroundings in which he finds himself placed, and, failing, often gives up the struggle as beyond his ability, always on the bottom round and ready to join in any scheme that offers, at once surrendering good citizenship and ability to care properly for his offspring. I need not inquire of my brethren what influence this will have on the brain and brawn of the children of such parents, as generations come and go. Your intelligence, your observation from experience, tell you that degeneracy will be the result; and as the "mind's the measure of the man," so in early training is the shaping of manhood.

> "'Tis education forms the common mind—
> Just as the twig is bent the tree's inclined."

Were lines ever written more truthful and forceful? The parents cannot teach, for they know not. The school knows not how, nor will until it has trained educators who intelligently handle this subject, thus fitting our children as they take our places to sensibly and nobly perform duties they will understand, revolutionizing and rehabilitating in a physical and moral sense, giving men and women of our profession better material and only a minimum of neurotics to worry over.

We are just now being treated in a senseless way to a jumble of opinions concerning the teaching of religion in our common schools. It is urged by those of Protestant faith that Romanism, or the Roman Catholic Church, is endeavoring to establish its religious views and doctrines in our common schools. I have not the least doubt that the smallest church membership in the world

would take possession of the common schools and prosecute their religious faith if they could. The average attendants at common schools and colleges are not anxious to spend time for religious instruction in this way. The church of their fathers and their Sunday school have given them enough of this. Reflection on saints' rest, counting of beads, or meditation on infallibility of the Pope, does not interest.

I call attention to this as a proposed part of the curriculum, which if introduced would add still another element to our overstrained and overdone system of education. I desire to bring to your notice a leaf from memory regarding special observation of results from overworked and high-keyed lads and lassies, victims of the overstrain of which this paper treats. Maggie, a bright child of seven years, commenced to fade, the bright lustre of the eye became dull, and after a few weeks of this appearance choreic symptoms developed, mild at first, but finally assuming a graver type, at which stage of the malady I was consulted. The mother stated she had thought nothing serious of it at first, as the child was growing and appetite rather failing —supposed she had gotten nervous, never presuming her studies had anything to do with the trouble. I assured the mother of the danger if she kept her in school, advised rest, recreation, and vacation; following which advice she soon recovered.

A similar case under my observation, several years since, resulted fatally after every available means had been resorted to, because neglected too long before remedial measures were sought or cause removed.

Neither of these mothers had the slightest idea that overstudy and neglect were in any way responsible. What one child will endure with seeming impunity may be the death of another, hence the necessity of vigorous reform in the education of the rising generation.

Better home discipline is what is needed, and what will in time be brought about when physicians, the true conservators of a nation's physical welfare, shall wield the power and influence they may by and through sanitary measures which shall include a better method of school education—for physiology as now taught in our schools is little better than a farce, teachers as a rule knowing nothing of it, and rarely interesting the young mind in a disciplinary study of the results likely to follow transgression of physical laws.

I appeal individually to every member of this Society to look at this matter earnestly, for by none can the subject be more appropriately advanced than by the medical fraternity. We should be awake to every reform that the people need, having a bearing upon the future physical welfare of the race. The pulpit and the press will aid us if we once clothe the subject in a simple garb, comprehensible, attractive; thus will we awaken interest by example, by appealing to our legislators, publishing leaflets, writing articles for our newspapers and journals, giving lectures in our schools, academies, and colleges occasionally, until the desired interest is made effective and educators of youth comprehend the subject in its true bearings. This result once accomplished, the underlying cause of neuroses will have been removed.

If this seems foreign to my paper, I beg to state that it is only our apathy that tolerates this shameful misrule of the young, and if physical law is to be respected we must commence soon or the race in a few generations will rank inferior intellectually and physically. Consult statistics relating to infant and childhood mortality, and reflect that the tens of thousands that die annually are mostly victims of ignorance in management, dress, and diet, and it will convince the thoughtful that the community needs to be aroused to the inculcating of sound discipline in its bearing upon the young; for such loss is due almost wholly to ignorance, and is to be remedied by educational measures.

Adrian, Michigan.

READING AT THE BEDSIDE.

It seems to be the opinion of many that those too ill to read are too ill to listen. It is true that the sick as a class prefer to hear an anecdote or the news retailed to them by word of mouth. Nevertheless a good reader, one of slow, distinct speech, and with a voice sweet and smooth enough to put the listener to sleep, tends to soothe the invalid and quiet nervous excitement. The reader, however, should always be seated at the side or foot of the bed where his face can be seen by the patient.

Correspondence.

SMALLPOX IN CHICAGO.

The conference of representatives of the States immediately contiguous was held in Chicago May 9th and 10th, to consider the alarming increase of smallpox in this city and the danger of its spread. The State Boards represented were: Illinois, Indiana, Ohio, Michigan, and Wisconsin. The propositions of the conference concerning what should be done were signed by all present, including the Health Commissioner of Chicago, and if enforced it is believed the epidemic will be promptly stopped. The propositions adopted are:

The city to be divided into districts containing not more than 10,000 people:

Each district to be placed under the supervision of a competent medical inspector with necessary assistants to make a house-to-house inspection; to successfully vaccinate within the shortest possible time all persons who have not been vaccinated during the outbreak, and that the first vaccination be within seven days; to properly disinfect all houses (and their contents) where smallpox occurs:

Necessary means and appliances for efficient disinfection of materials, premises, etc., to be provided as the exigencies of each district may require:

Each case of smallpox to be immediately removed to a suitably constructed and properly equipped and officered isolation hospital:

Except in extreme cold weather, hospital tents, as prescribed by the United States Army regulations, floored and warmed, are to be preferred to the average hospital or private dwelling, as they increase the chances of recovery. Cases of smallpox necessarily detained in their own homes, with their attendants, to be rigidly isolated during the period of danger, and physicians visiting such patients professionally to be subject to such regulations as may be prescribed by the local Health Officer:

Persons exposed to smallpox contagion to be immediately vaccinated, or re-vaccinated, and kept under observation for not less than fourteen days from the time of last exposure.

It was the sense of the conference that if such measures are all enforced, it will not be necessary for neighboring cities and States to exclude all persons hailing from Chicago who are not protected against smallpox by vaccination, nor to require disinfection of all baggage and merchandise capable of conveying smallpox infection.

The U. S. Marine Hospital Service has instituted a system of inspection of vessels, crews and passengers leaving Chicago, and vaccination of all crews.

Resolutions relative to lake ports and land quarantine were adopted as follows:

No vessel plying on the lakes to be allowed to enter any port within the boundaries of our respective States without having on board, subject to inspection, a bill of health, duly signed by an officer of the United States Marine Hospital Service:

In the opinion of this Conference, strict quarantine by land is unnecessary at present, but the question may well be considered whether any person from any city where smallpox continues to exist in epidemic form should be allowed to stop in our States without having a certificate of vaccination within the past three years, and that in case of establishment of quarantine all passengers boarding trains should be informed that unless provided with vaccination certificates from proper authorities they will be liable to examination, and re-vaccination at the State line.

On invitation, a committee of the clothing and textile-garment manufacturers of Chicago met the conference, when the following propositions were submitted in joint session:

This Conference respectfully informs manufacturers of clothing that, owing to the prevalence of smallpox in certain districts of this city, deep apprehension exists in regard to the possible infection of clothing and textile garments made or finished by persons or families living in said districts, some of whom are in close relation with the sick, either in the same house, or having free communication therewith:

In view of these facts, we further inform the said manufacturers that under the circumstances we shall be obliged to recommend to our several State boards of health that no clothing or ladies' dresses or textile garments for sale be allowed to enter or be distributed within our respective States, except in accordance with the following measures, viz.:

That an efficient daily inspection, with all that such inspection implies, of all places in which such goods are manufactured in the city of Chicago, be established and maintained under the direct supervision of the Illinois State Board of Health, to the end that no such articles from any infected locality shall be put upon the market for sale or shipment, or be otherwise distributed to the menace of the public health:

The adoption of the foregoing measures will in our opinion measurably restore confidence and facilitate trade, but we desire to point out that the continuance of trade will finally depend on efficient general sanitary operations for the suppression of the disease.

The propositions were fully endorsed and accepted by the committee representing the clothing and textile-garment manufacturers, and the succeeding day another meeting of manufacturers was held, when a considerable sum of money was collected, and committees appointed to collect more and to see that the measures are carried out.

The State of Illinois has factory inspectors to look after conditions affecting the health of employés, and public-health interests, and though these are not sufficiently numerous to do the work needed relative to smallpox, yet they may supply a very well trained and useful nucleus for that service. The Secretary of the Illinois State Board of Health gave emphatic assurance that the

work agreed to by the conference and the manufacturers should be faithfully performed; and in the event of its failure to start or of its discontinuance, he would see that the members of the conference have prompt notice.

The final results of the conference are therefore awaited with interest.

HENRY B. BAKER.

Lansing, May 15, 1894.

PECULIAR CASE OF CRIMINAL ABORTION.

Editor MEDICAL AGE:

I desire to report a somewhat peculiar case of criminal abortion.

Mrs. C——, aged thirty, married, with one living child (two previously still-born), applied to me in February last to produce an abortion, stating she was "just over her time."

I declined, whereupon, as I subsequently discovered, she proceeded to try all sorts of drugs to accomplish her purpose—all that she knew of, and likewise all her neighbors could supplement to her list.

I saw nothing of her for six weeks, when I was called in a hurry on account of excessive flow following abortion. I ascertained that after leaving me she suffered great torture, with constant nausea and vomiting, so much so that she was obliged to remain in bed a greater part of the time. Believing from previous pregnancies that this would continue throughout the whole period of gestation, she determined to get "rid of it" at all hazards.

All that she took was of no avail until someone, who claimed to have tried it herself, recommended *bird shot*. This was to be taken in tablespoonful doses every hour or two until flowing commenced. My patient took two doses, when her stomach refused further medication of the sort.

Obstinate constipation supervened, culminating in severe lead colic, with blue line around the gums. Apparently the fœtus must have been destroyed almost immediately, for nausea and vomiting were relieved as soon as sufficient absorption of the lead had taken place to induce colic; it was delivered about four weeks after the first ingestion of the shot.

The case is unique to me from the fact that shot was used as an abortifacient.

W. M. DONALD.

970 Jefferson Ave.,
Detroit, Mich.

Society Meetings.

WAYNE COUNTY (MICHIGAN) MEDICAL SOCIETY.

The regular meeting of this organization was held May 16th, with Doctor E. B. Smith in the chair.

A paper on "Treatment of Inevitable Abortions" was read by Doctor Kenneth Gunsolus.

Doctor J. E. Westgate inquired if there was not some danger, when using intra-uterine injection, of forcing the fluid into the Fallopian tubes?

Doctor W. D. MacQuisten agreed with Doctor Gunsolus in the methods advised, and inquired about the strength of the sublimated douches used.

Doctor L. E. Maire advised the use of cheese-cloth for packing the womb in preference to cotton; he believed that the tampon was valuable in stimulating the uterus to contract and expel the placenta in cases of retention; thought there was danger in the intra-uterine douche, and cited a fatal case.

Doctor Brand used a curette with a continuous stream running through it, and had never had an accident; it was his practice to swab the uterus with pure carbolic acid after curetting. At three and a half months the placenta is likely to be retained, as it is then larger than the fœtus, and the safest plan is to remove it with the curette or fingers without waiting for Nature to expel it.

Doctor Smith said he had used a lithotomy forceps for removing the placenta, and had also used the curette described by Doctor Brand.

Doctor Bell said he was averse to using water in the uterus; curetting, he thought, was indicated by a rise of temperature.

Doctor W. R. Henderson cited a case. He found the placenta and therefore he had not considered it necessary to use the curette, but the patient's temperature rose a few days afterwards. Another physician who was called, after curetting, reported the removal of a piece of the placenta.

Doctor Heggie agreed that great care should be used to remove the contents of the uterus, and cited a case of septicæmia from retained placenta.

Doctor Gunsolus said that the tampon is valuable in arresting hæmorrhage, and also in stimulating the uterus to contraction. Ergot is contra-indicated: Quinine he considered more regular, constant, and safer. He cited two cases of twin abortion as an argument in favor of curetting, because after the

expulsion of the fœtus and placenta another might remain in the uterus.

Doctor Westgate reported a case of labor with complications. The patient had hæmorrhage five months before, but after tamponing for twenty-four hours it ceased and the os contracted on the third day. She had measles a week before confinement, and forty-eight hours before this diarrhœa, which lasted through the period of labor and for three days after. She is now suffering from extreme tenderness of the spine.

Doctor Gunsolus reported a case of hydrophobia, or a disease closely resembling it. The patient, a boy fourteen years old, had been bitten on the ear by a dog. When seen he was barking and attempting to bite those around him. He had no pharyngeal spasms, and was able to swallow all through his illness. Large doses of hyoscyamus and chloral were required to quiet him. *Simaba cedron* in three-minim doses was then given, and the paroxysms ceased.

All members wishing to attend the San Francisco meeting of the American Medical Association as delegates were requested to hand in their names to the Secretary.

The meeting adjourned to meet on the first Thursday of September.

After the meeting a collation was given by Doctors Brand and Maire.

R. H. HONNER, *Secretary.*

AMICK VS. CULBERTSON.

If anyone should need information as to the character and methods of Amick, of the Consumptive Cure Company, let him read the testimony given before Esquire Cass as published April 7th, 1894. Amick admitted that he conformed fully to his own definition of a quack; also that his claim to a cure for consumption refers to only twenty-five per cent. of the patients who apply—hardly as many, in fact, as recover spontaneously; he says nothing of the other seventy-five per cent. He likewise admitted that two bogus dispatches were gotten up in New York and sent forth by the Associated Press to some two hundred newspapers, and were printed as advertisements. Of course he could see nothing unethical in any of this.

It is certainly creditable to the profession of Cincinnati that they are almost to a unit on the side of the defendant, and that such gentlemen as Doctors J. T. Whitaker, David Debeck, Charles A. L. Reed, C. G. Comegys, John A. Murphy, etc., appeared in court for Doctor Culbertson.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

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Editorial.

A CORRECTION.

In the March 26th AGE appeared a paper on "Pharmacology of the Camphor Group," which by a typographical error gave the author as Professor Rudolph Robert.

The article in question was by Professor Rudolph KOBERT, the well known *savant* of the Pharmacological Institute, Dorpat.

A FALLACY IN PALATABLE THERAPEUTICS.

The fad that requires non-bitter and tasteless preparations, instituted to cater to a desire on the part of the patient that everything shall be palatable, seems to have gone to extremes.

We cannot illustrate this better than by speaking of the recent experiments of Doctor Huber in Germany with the active principles of cetraria, calumba, quassia, and wormwood. The results obtained were overwhelming evidence of the fact that the bitter principles in drugs add materially to the tonic effect by augmenting peristalsis, and chiefly in those portions of the tract in which the intestinal contents are inclined to be impacted. They also tend to induce considerable intestinal hyperæmia.

It is therefore evident that the bitter principles possess specific indications. Thus, for instance, on removing the quassine from the quassia, the latter becomes practically inert for either good or evil, whereas on ingestion of the former the tonic effect pertaining to the original drug is obtained with the result of slight promotion of peristalsis. Again, absinthin excites peristalsis to such a degree that it is almost entitled to be placed among the laxatives.

The evidence, then, is that the bitter principle of tonics is essential in all cases of gas-

tric and intestinal atony; and this leads us to a thought regarding a comparatively new drug, viz., cascara sagrada.

The original drug was decidedly bitter, but the fashionable fads required that the *amara* principle should be eradicated, which has been done with "pharmaceutical elegance" by the different manufacturers, but manifestly at the expense of the value of the drug, which, less a cathartic than an intestinal tonic, must derive its virtues largely from its influence upon peristalsis, and its stimulant effect where there is gastric and intestinal atony. To-day we have tasteless and aromatic cascaras, elixirs, syrups, and the "Lord knows what" besides, and yet the practitioner administering in the same proportions fails to obtain the same satisfaction as he did from the solid extract or the original bitter fluid extract, from neither of which was the *amara* principle eradicated. And in this connection we cannot help noting a fact that recently came to our knowledge regarding a certain aromatic preparation put out by a firm of pseudo-nostrum makers, and for which its proprietors claimed unexampled virtues. An examination revealed the mysterious fact that the amount of extractive in the preparation was in the proportion of fifty-five against not to exceed *twenty-eight* obtainable from the drug itself. This can mean but one thing, viz., *sophistication* to the detriment of both the prescriber and patient.

UBI PUS, IBI EVACUA.

In the days of oral examinations for the medical degree, a dialogue, something like that which follows, might often have been heard in the private room of Professor Gross at Jefferson Medical College:

Professor: What will you do when pus is present?

Student: Let it out.

Professor: But suppose it is in the brain?

Student: Let it out.

Professor (with well simulated horror): What! would you plunge a knife into the great central organ of nervous force? Don't you know that wounds of the brain are likely to prove fatal?

Student (if he is wise): But in this case withholding the knife would be fatal; its use might save life.

The unwise student who, disconcerted by his examiner's sudden change of tone, fell into the trap set for ignorance and faint-heartedness, was informed that in all probability he "would never make a surgeon; but he might try again next year."

The medical profession of America stands to-day in the attitude of the weaklings whom Gross wisely refused to pass until they had better learned the lessons of decision and courage. There is in the body medical a suppurating focus from which infection spreads, threatening destruction to the higher life of physicians, and we hesitate to incise and evacuate. "But it is in the brain!" we cry.

If offenders against honor and decency are prominent and powerful; if they are socially influential, politically strong, personally popular—all the more reason that their corrupt example should not be permitted to demoralize the young and wavering in our ranks; that the community should not be suffered ignorantly to accept them as representatives of the moral and professional standard of the physicians of the country.

These reflections have been suggested by the perusal of a circular scattered broadcast by the "Columbia Chemical Co., of Washington, D. C.," advertising "Animal Extracts Prepared according to the Process and under the Supervision of Doctor William A. Hammond." It is in the shape of a pamphlet of forty-four pages, thirty-eight of which are devoted to the preparations mentioned. The first page of the cover, bearing title, "Press Clippings—What the Newspapers of the Country Say about Doctor Hammond's Animal Extracts," is adorned with an illustration that would do credit to Ayer's, Jayne's, Hood's or Warner's almanac. Its subscription reads, "Testing the Fluid." A half-clad athlete rests his left hand on a table on which stands a large glass jar half-full of liquid and with a funnel in its mouth, while his right hand holds triumphantly aloft a dumb-bell of enormous size. In the distance two venerable individuals, presumably *savants*, are making gestures indicative of surprise and admiration.

The pages are filled partly with frank advertisements of the all-curative powers of

Doctor Hammond's Extracts, which "are for sale by all druggists," and partly with copies of "interviews" and "correspondence" from newspapers of the United States. These articles, which bear unmistakable evidence of their "purely business" merits and inspiration, describe in glowing terms the effects of the "elixir of life." discovered by "the famous American scientist and retired Surgeon-General of the United States Army."

Doctor Hammond is a somewhat learned man, whom at one time the profession honored. Were it but a personal question now, we might charitably suppose him to have lost his reason, and pass his aberrations by in silence.

But the taint of patent-medicine methods is so rapidly spreading in all directions, so many medical journals have sold themselves to "enterprising manufacturers," so many reputable men are inclined to look with indifference upon nostrum-vending and nostrum-vaunting by others, so that their own skirts are kept clear, that it seems to us the time has come to make an example.

If the Columbia Chemical Co. is acting without Doctor Hammond's knowledge, he should repudiate it and its methods publicly. If it is acting with his knowledge and consent, he has forfeited all claim to respect or consideration at the hands of physicians, and should be deprived of membership in any medical association that still bears his name upon its roll.

The medical officers of the United States Army and the faculty of the New York Post-Graduate Medical School have a plain duty to perform, and should not hesitate to do it.

And when we have made the first incision, let us not hesitate, but cut deeper and deeper, until all the nostrum-mongers and certificate-sellers, high and low, whoever and whatever they may be—editors or professors, dignitaries of the American Medical Association, or obscure "practitioners"—have had a way opened for their exit.

Let the pus out!

STUPENDOUS CHEEK.

The supreme impudence of the patent-medicine man is appalling. Noting the success which his proprietary brother has attained in hoodwinking and gulling the medical profession, he boldly enters the field in competition with the latter, and stops at no means to secure his purpose. One of the cheekiest performances which we have ever known occurred in connection with this journal, which received a few days since the following letter advertising a rheumatic cure that "has never yet failed." There was no pretense to formula, or to scientific combination, and the circular which accompanies the letter simply declares it has "cured several thousand cases;" that it is "composed wholly of vegetable matter found native in South America;" and, finally, that it will not injure anyone:

May 4, 1894.

Medical Age, Detroit, Mich.

DEAR SIR:—By this mail, under separate cover, we are sending you marked copies of papers containing three press notices (some of which you may already have seen) in regard to a new, reliable, and, so far as we are able to judge, invaluable cure for rheumatism. It is the discovery of an expert German chemist of high standing.

We are of the opinion that the remedy will prove of deepest interest to the medical profession, a number of whom have already prescribed it for patients; and therefore request that if consistent with your policy you will give it such notice as your judgment and space will allow. Such a courtesy will be fully appreciated by a former Newspaper writer (*N. Y. Tribune*).

If any of your friends or acquaintances are afflicted we shall be most happy to send you, with our compliments, a bottle for their use. If you give "BLANK'S RHEUMATIC CURE" a notice, kindly send us a marked copy of that issue. Thanking you in advance for any courtesies extended, we are

Yours most truly,
BLANK'S RHEUMATIC CURE CO.,
By ——, *President.*

The former newspaper writer (with a big N), with all his relations to the *New York Tribune*, etc., is fully privileged to the courtesy which we herewith accord him.

EDITORIAL NOTES.

The Press, the Quacks, and the Public.—

Recently in an address delivered at Toynbee Hall, London, Mr. Ernest Hart, after referring in a general way to the growing power of the press, its accumulating responsibilities, and the admirable manner in which

upon the whole they are fulfilled, turned to certain phases of journalistic responsibility which more especially came under his notice as a medical editor.

He cited a considerable number of instances in which untold harm was effected at the present moment by the facility with which a considerable number of journals with high position and large circulation placed their columns at the disposal of a large class of persons who habitually practice open falsehood and deceit. The vast circulation of the daily and weekly press, growing in importance, makes this subject one of daily increasing moment, and he openly and directly charged a large proportion of the newspaper press with sacrificing their duty, the honor of their calling and the interest of the public to the inducements of quacks and vendors of either dangerous or insidious wares, offered at preposterous prices under palpably false pretenses. Mr. Hart then concluded with a statement (manifestly true) that the health of the people at large was being undermined, their morals sapped, and were moreover being robbed wholesale by the unscrupulous vendors of secret medicines. Worse than this, a great proportion of religious and provincial papers sold their columns to persons who openly traded upon the weaknesses and the fears of the married and unmarried of both sexes.

New Remedy for Epilepsy.—

Doctor I. J. M. Goss, of Marietta, Ga., considers Passion Flower (*Passiflora incarnata*) a very valuable adjunct to Horse Nettle in the management of epileptic cases. He also finds it controls the nervous irritability due to teething in children, without being narcotic; that it is soporific with no after-effects, and especially valuable in the delirium of typhoid or other sthenic fevers.

For epilepsy he suggests a full dose be given at bedtime, especially where the attack comes on at night; and that during the day the patient should take a full dose of Horse Nettle before meals, "to prevent the flow of blood to the brain and spinal centre." This treatment should be continued several months.

Doctor Goss adds he employs Passiflora in many nervous affections where he formerly used opium and morphine, and finds it preferable to the latter both as a nerve sedative and mild soporific.

A Pertinent Fact.—

In a charge before the grand jury at Paterson, N. J., not long since, Judge Dixon gave utterance to the following:

If a man, conscious that he carries about with him the germ of a contagious disease, recklessly exposes the health and lives of others, he is a public nuisance and a criminal, and may be held for the results of his conduct. If death occur through his recklessness, he may be indicted for manslaughter. It is held that where a person knowingly communicates a contagious disease to another, the crime is that of manslaughter. . . . The man may be indicted also for spreading the disease by conscious exposure of others thereto by his presence in public places, such as on the street, in halls, etc. He may be indicted as a public nuisance for endangering the public health in this way even if no consequences followed. The law provides a penalty for such offences against the public safety.

Michigan State Medical Society.—

A very successful session of this organization was held in Lansing on Thursday and Friday, May 10th and 11th, about two hundred being in attendance. A large variety of the most interesting papers were presented in the different sections.

The 1895 meeting will be held at Bay City with the following officers: H. O. Walker, Detroit, President; Victor C. Vaughan, Ann Arbor, C. H. White, Reed City, N. Logue, Adrian, C. H. McKain, Vicksburg, Vice-Presidents; C. W. Hitchcock, Detroit, Secretary; William G. Henry, Detroit, Treasurer; Fleming Carrow, Ann Arbor, Frank Garber, Muskegon, E. L. Shurly, Detroit, Judicial Council.

An Old and Advanced School.—

Doctor Peyton Turner writes from Monterey, Mexico, of the medical college in that city, which was founded back in the fifties:

The curriculum embraces a course of six years, and the teaching covers a period of ten months each year—the classes being subdivided to correspond in number to the years of attendance. The text-books are in

French, though teaching is carried on in Spanish. Strange to say, the principal physician in Monterey, and also at the head of the college, is Doctor John God. Another advantage of this school is that its diploma always bears the photograph of the possessor.

Apply the Test of Utility.—

A recent writer declares that there is great danger of the profession becoming too scientific; that every idea, every discovery, every experiment, should bear the stamp of practical utility, or, when weighed in the balance and found wanting, discarded. He pertinently adds: "The border-line between medical science and medical absurdity is narrow, and is sometimes unconsciously crossed." Indeed it would be well to pause occasionally in our investigations and ask judgment whether the knowledge we are laboring for will benefit or injure mankind, or fall like good seed on stony ground.

Complacent Innocence.—

When the attention of the representative of a lay paper in Cincinnati was called to "lost manhood" advertisements with their "before and after" heads and tales, by the *Cincinnati Lancet-Clinic*, the editor of the latter journal was stunned by the statement that such "are believed to exert a great moral influence over the young and innocent, as they graphically portray the effects of sinful acts, and hence have restraining power."

The "livery of the devil whereby to serve heaven" would be a joke in its application compared to the foregoing.

Ptomaine of Influenza.—

The *Pharmaceutische Centralhalle* claims that a ptomaine of influenza has been secreted from urine of patients, with the formula $C_9H_9NO_4$; that it occurs in prismatic crystals, is soluble in water, poisonous, and forms crystallizable compounds with hydrogen, platinum, and gold chlorides.

Cholera in Portugal.—

Recent dispatches indicate that Asiatic cholera has obtained a firm foothold in the Iberian Peninsula. Over two hundred cases have been reported in a single day at Lisbon, Portugal. It is also raging at Cadiz and Barcelona.

Items and News.

A Chesterfield Gorilla.—

There recently died in a Berlin menagerie a gorilla of great elegance of manner. Its habits of life were regular and most precise, and the account given of its daily occupations reads much like the court bulletins of the Grand Monarch. It was accustomed, it is said, to wake at eight o'clock in the morning and take a glass of milk. Certainly this conformity to time, rather than daylight, marked an advance from the animal to the conventionality of man. It is not said whether the milk was brought to the gorilla or called for. The account goes on:

"At nine o'clock it made its toilet with as much care as a civilized man, and ate its breakfast a few minutes afterward. This consisted of two Vienna loaves, Hamburg smoked meat, cheese, and white beer.

"Another bit of refinement in preferring a light beer for breakfast, especially after a careful toilet.

"At one o'clock in the afternoon it had a cup of chicken soup with carrot, rice and potatoes, and an egg. Its evening meal consisted of fruits, bread and butter, and a cup of tea."

It will be noticed that the chief attentions of this gorilla were gastronomic; but the evident care bestowed upon the selection of its viands was truly civilized and human. It is not stated what was the cause of death. It is to be hoped it was not the inadvertent use of a dark beer or a hasty toilet.—*Boston Medical and Surgical Journal.*

Yes! Yes!!—

A certain surgeon of St. Louis, posing as an authority, removed a tumor from the face of a man recently, after which a microscopical examination was made by the surgeon, assisted by a couple of his students. Based upon their microscopical finding, the surgeon reports that he has "classified the tumor as a fibro-myxo-chondro-osteo-sarcoma of bronchial origin." The name seems to take after some of our coal-tar remedies, and its classification reminds us of the story of the backwoods Dutch preacher. As he arose to open his meeting he said: "Brederen, we'll sing de one tousand und 'leven hundred hymn!" The fellow who was appointed to start the music, in his confusion to find the number, spoke out: "There's not that many hymns in the book." (The number was 111.) The minister, not to be beaten, said: "Very well, den; we'll sing vot dere be of dem."—*American Medical Journal.*

Origin of Blankets.—

In 1349 there lived in England a man who, when the nights were cold, would grumble at his wife because she was able to obtain comfort by utilizing her petticoat as a coverlet while he was uncomfortably cold. Being of an inventive turn of mind, he at last conceived the idea of weaving together the coarse, dark ends of the wool that were not fine enough to yield good cloth, making thereof large squares with selvedges on all sides; these proved to be excellent bed-covers. They speedily came into favor, and such was the demand that he soon made a regular business of manufacturing these articles. They have been in use ever since, and have always been termed blankets, a title derived from the name of their inventor, who was one Thomas Blanket.

Uselessness of Mydriatics in Examination for Glasses.—

It has been the custom for oculists generally to employ atropine, or some other mydriatic, when testing the eyes. Doctor D. B. St. John Roosa declares he has abandoned mydriatics since visiting Paris in 1887, where the work of the ophthalmometer of Javal entirely converted him.

The object of employing mydriatics is less to determine how much hypermetropia exists than the amount of astigmatism, and the degree of the latter. It seems that now, with a perfected ophthalmometer, the measuring of the cornea is very much simplified, and by taking the difference between the horizontal and vertical meridians the rest of the prescription is easy.

Apoplexy.—

Apoplexy is most frequent in France, Russia, Holland and England in the winter, and in Canada and the United States in summer. It is most fatal at Bordeaux, in France, there being a ratio of 780 deaths to every 10,000 of inhabitants. The least ratio is in Nova Scotia, being only 55 in 10,000. It has increased in England to a very remarkable degree since 1850. It seems that in the sixteen years ending with 1886 there were 475 deaths from this cause per million inhabitants, and in the year 1886 the ratio had increased to 577 per million. In the whole United States, according to the census of 1880, there were but 140 cases of apoplexy to every 10,000 deaths.

Entirely Too Scientific.—

Recently in conversation with a prominent physician of a Western city, he said: "I am inclined to believe that we are becoming *entirely too scientific*. I have just finished reading a very lengthy article in one of our journals on the ætiology and diagnosis of diphtheria; and while I have not, for the past twenty-five years, had any trouble in diagnosing cases of this kind with a tolerable degree of accuracy, I am now so confused with the Klebs-Loëffler bacillus that I am in doubt whether I would be able to recognize a case of diphtheria, with its new-fangled pathological trappings, if I should meet it."—*Journal of Materia Medica.*

Exploratory Abdominal Section.—

Doctor Deaver says the principal objection to exploratory section is that it lessens the responsibility of the surgeon as a diagnostician. "I fear the modern tendency is too much in the direction of exploratory incisions in other regions of the body, as well as the abdominal cavity, for diagnostic purposes. The operation should be the natural sequence to the diagnosis, and not the diagnosis to the operation."—*Philadelphia Polyclinic.*

American Medical Publishers' Association.—

The annual meeting will be held at White Sulphur Springs, West Virginia, August 3d and 4th, 1894. A preparatory and special meeting has been called for June 4th at San Francisco.

The Transactions of the Pan-American Medical Congress.—

The manuscript of the proceedings is now in the office of the Public Printer, and will be put to press at once under the supervision of the Editorial Committee.

Involution.—

Doctor Theophilus Parvin insists that the involution of the sexual organs after confinement takes place more rapidly and satisfactorily when the mother nurses her infant.

The American Orthopædic Association.—

The eighth annual session of this organization will be held in Washington, D. C., May 29th to June 1st, inclusive.

Astonishing Versatility.—

A Canadian paper acknowledges the receipt of an egg which "was laid on our table by Rev. Mr. S——." Mr. S—— appears to be a *lay*man as well as a *clergy*man.

Sound Sense.—

There is more help in an ounce of encouragement than in a ton of advice.

Book Reviews.

THE CANADIAN MAGAZINE. Price, 25 cents; $2.50 per year. Ontario Publishing Company (Limited), Toronto.

The May number opens with "The Comic Ballads of Homer," by Thomas Hodgins; A. C. Shaw writes of "A Sun Dance Among the Sarcees," E. B. Biggar of "Memories of Bathurst," Thomas E. Champion of "Popular Superstitions;" an especially interesting article is "Two Canadians in Algeria," by Alan Sullivan; J. F. M. Fawcett writes of "The First Plantation in Newfoundland," Harriet Ford of "The Royal Canadian Academy of Arts," Reverend W. S. Blackstock of "Ghosts of the Living and of the Dead," Eugene Davis of "French Journals and Journalists." Of more than ordinary interest is an essay by David Boyle, entitled "A Public School Triumph;" Clifford Smith contributes a bit of fiction under the title of "Narcisse's Friend." The poetry of the number comprises "Les Huguenots," "To a Mayflower," "A May Morn Dream," "Eventide," and "Entanglement," by L. O. S., Reverend C. T. Easton, W. A. Sherwood, John McCrae, and Orac, respectively. There are the usual "Gable Ends," Scientific Notes, and Book Notices.

INTERNATIONAL CLINICS. Edited by Doctors Judson Daland, J. Mitchell Bruce, and David W. Finley. Cloth; 8vo; pp. 358. Price, $2.75. J. B. Lippincott Co., Philadelphia.

The number before us is Volume One of the fourth series, which speaks well for the reception the Clinics have received at the hands of medical men. Within the limits of a medical journal it is impossible to do justice in the way of a review to a volume like this. There are no less than forty-three titles, including a memorial of Charcot, all by well known authors, the majority being experts in their particular lines. The International Clinics as a whole is published quarterly, and is a collection of the best and most interesting lectures delivered in the leading medical colleges of Great Britain, Canada, and the United States. These lectures, after being reported by competent stenographers, are arranged by the editors in a form best suited for the purposes of the work, and afterwards returned to the authors for personal revision. The reader is thus given the final thoughts and the most advanced practical ideas of the ablest professional teachers.

THE ATLANTIC MONTHLY. Price, 35 cents; $4.00 per year. Houghten, Mifflin & Co., Boston.

The May number contains several contributions of more than common note. "From Blomidon to Smoky" is the first of a series of four articles by the late Frank Bolles; the papers represent his last studies of nature, and were his last literary work. The memory of Francis Parkman is honored by articles from his fellow historians, Justin Winsor and John Fiske; Professor T. C. Mendenhall contributes an article entitled "The Henry," on the newly chosen term of electrical measurement, and gives the American scientist, Joseph Henry, his rank with the great electricians of the world; Gilbert Parker contributes a tragic tale of the Hudson Bay Company, entitled "Three Commandments in the Vulgar Tongue;" Mrs. Deland's serial, "Philip and his Wife," proceeds; "Talks at a Country House," by Sir Edward Strachey, contains some hitherto unpublished rhymes by Edward Lear of the "Nonsense Verses." There are also papers on literature, art, and travel.

THE DELINEATOR. Price, 15 cents; $1.00 a year. Butterick Publishing Co., New York.

The June, or summer, number of this magazine presents a largely increased amount of practical and interesting reading matter. "A Girl's Life and Work at Smith's College" is described by a recent graduate; "Nursing as an Employment" is ably treated by Louise Darche; an appropriate "pattern" article is on "Dress for Summer Sports," and another, equally suitable, gives information on "Trunks and Trunk Packing;" the opening chapter on "Vocal Culture" is by the author of "Delsarte Physical Culture." The papers on "Hygienic Living" are continued; the confidence which should exist between "Mother and Daughter" is the theme of an article bearing that title. Also is described "A Rosebud Party," "How to Serve Small Fruits," "Daintiness in the Home," etc. There is the ever popular "Tea-Table Gossip," "Book Reviews," and new and attractive designs in "Knitting," "Tatting," and "Crocheting."

DEMOREST'S MAGAZINE. Price, 20 cents; $2.00 per year. W. Jennings Demorest, New York.

In the June number the vital question of "Good Wives" is discussed by Susan B. Anthony, Clara Louise Kellogg, Mrs. Ballington Booth, Mrs. A. M. Palmer, Ella Wheeler Wilcox, Ellen Batelle Dietrick, and others, all qualified by experience or judicious observation to give opinions worthy of careful attention, and every opinion bears the individuality of the author and is well worth reading. Equally interesting is an article on "How News is Gathered," which

leads one to appreciate what a marvel the modern newspaper really is. Another curious and unique paper is "Photography and Crime;" "The Road to Fame or Fortune" gives some valuable information; "The Summer Care of House Plants" furnishes important hints for those interested in floriculture; "Ant Stories" and the "Puzzles" afford amusements for children.

McCLURE'S MAGAZINE. Price, 15 cents; $1.50 a year. S. S. McClure, Limited, New York.

In the June number Hamlin Garland contributes "Impressions of a Visit to the Great Carnegie Steel Mills at Homestead;" Cleveland Moffett continues his account of "The Care and Training of Captive Wild Beasts," the illustrations being from life by Mr. Hambidge; M. de Blowitz, the famous European correspondent of the London *Times*, discusses the chances for "The Peace of Europe;" A. W. Greeley reviews the chances of success of the Polar expeditions now in progress, and describes the physical conditions which oppose success; in the department of "Human Documents" appear portraits of Cardinal Gibbons, Lord Rosebery, and Richard Harding Davis. Julian Ralph, the well known newspaper correspondent, also makes his bow as a poet. The fiction is by Rudyard Kipling and Octave Thanet.

GODEY'S MAGAZINE. Price, 25 cents; $3.00 a year. The Godey Co., New York.

The May number is especially attractive inside and out. The second installment, illustrated, of "A West India Cruise," by Frederick W. Seward, is as interesting as its predecessors; "Royal Foes," a serial by Frederic Reddall, is continued; two other illustrated articles are "Bermuda's Sunny Isles," by Mary E. Child, and "Capri," by J. Howe Adams. The short stories and special articles are "The Heavenly Twins of Columbia Street," by Julia Magruder; "A Patron of the Arts," by Melville Upton; "Strayed from the Fold," by Lillian A. North; "Entirely by Rail," by Minnette Slayback Carper; "Physical Culture Necessary for Brain Workers," by Wilton Tournier. The poetry is by Will Carleton, Mel R. Colquitt, Lee C. Harby, Ernest N. Bagg, Nancy Mann Waddle, Rosalie M. Jonas, and others.

BIRDS OF MINNESOTA. By Doctor P. L. Hatch. Paper; 8vo; pp. 500. Published by University of Minnesota, Minneapolis.

This forms one of the volumes of the Geographical and Natural History Survey of Minnesota, and is by no means the least interesting of the series. Although a good deal, especially in specific characteristics, is necessarily a compilation, there is also added a large amount of new and valuable material regarding the habits of birds. Information is afforded which adds materially to our knowledge of the distribution and change of habits as result of locality. The work is most excellently gotten up, and one which is of especial interest and value to every ornithologist. Especial credit must be given to Mr. Henry F. Nachtrieb, the State Geologist, for the skill and taste displayed in preparing this, his first report, as made by his assistant, Doctor Hatch.

ESSENTIALS OF ANATOMY. By Charles B. Nancrede. Cloth; 12mo; pp. 388. Price, $1.00. W. B. Saunders, Philadelphia.

The favorable acceptance of this volume, and the fact that it is now in its fifteenth thousand, evidences the work has won for itself a place in medical literature. The author embodies only those facts which are truly "essentials of anatomy." Hence it becomes a very handy reference book, though of course it cannot be expected to replace the larger anatomical works in details. The basis of the volume is Gray's Anatomy, although the author informs us he has made free use of the works of Quain, Leidy, Bock, Allen, Morris, Tomes, Potter, Frey, Holden, Politzer, Thompson, and Cooper.

THE DISEASES OF THE WILL. By T. H. Ribot. Cloth; 12mo; pp. 134. Price, 75 cents. The Open Court Publishing Co., Chicago.

We have heretofore had occasion to review this book, and find it impossible to add anything new, since the very character of the publication is such that it requires to be thoroughly and conscientiously read in order to be appreciated. As a contribution to psychiatry it occupies a place unique in itself. A marked peculiarity of the work is that, while most authors attempt to give a detailed exposition of certain branches of psychology according to the principle of evolution, Ribot in the same spirit treats of these questions under another form, viz., that of *dissolution*.

SYLLABUS OF OBSTETRICAL LECTURES. By Richard C. Norris, A.M., M.D. Cloth; 12mo; pp. 222. Price, $2.00. W. B. Saunders, Philadelphia.

The author states this little volume has been prepared to meet the difficulty of accurate note-taking which most medical students encounter. The design is to secure for the student a consecutive outline of the work, and aid him in classifying the knowledge acquired in the lecture room.

Therapeutic Brevities.

Rhus Toxicodendron in Rheumatism.—A carpenter forty-seven years of age, some eight years previous had erysipelas followed by gradual increase of numbness in the left hip, mostly felt on going to bed at night. There was also pain, often intense, in the left foot, passing up to the thigh, then crossing over to the opposite hip. Suffering was usually relieved by gentle motion; was easier in dry and clear weather, and worse just before a storm—so much so that he knew two or three days before its coming. During the administration of Rhus Toxicodendron steady improvement set in, which continued to perfect recovery.

A lad seventeen years of age suffered from rheumatism three years as a result of a wetting obtained by working in the woods. Right leg and hip were stiff and painful, and he was so lame as to be obliged to take hold of the leg and lift it when he desired to walk. Also the knee-joint was flexed, and any attempt at moving caused excruciating pain. An extension of the leg was impossible. Here also Rhus Toxicodendron secured complete recovery.—*Medical Times.*

Bougard's Cancer-Paste.—This preparation, at present quite popular among New York dermatologists, is as follows: Wheaten flour, powdered starch, each one ounce; arsenious acid, eight grains; red sulphide of mercury, and ammonium chloride, each forty grains; corrosive sublimate, four grains; zinc chloride, one ounce; boiling water, one and a half ounces. The first six substances are finely ground and then mixed in a glass mortar. The chloride of zinc is dissolved in the boiling water, and this solution slowly added to the powder, the contents of the mortar being kept rapidly moving with the pestle until all the solution is added. It is allowed to stand for about twenty-four hours before using.—*American Medical Journal.*

Liquor Sedans.—In irregular, painful, suppressed or excessive menstruation, it is almost a specific. In uterine or ovarian neuralgia, in displacements of the uterus, which give physicians so much trouble and patients so much suffering, it will act like a thing of magic; and when the profession shall have become fully impressed, as it will the more we use it, with its remedial virtues, I believe we shall hear much less of the many operations in gynæcology, and find, no doubt, that in the end the present fad of cutting and slashing at the cervix could have been well dispensed with in favor of more conservative therapeutic procedures.—Doctor John J. Caldwell, in *The Virginia Medical Monthly.*

Tobacco in Intestinal Obstruction.—In *Gaceta Medica de Mexico* Doctor E. Garcia reports a patient *in extremis* from intestinal obstruction of eleven days' standing. He injected seven or eight quarts of an infusion of Tobacco by means of an œsophageal tube, a quart at a time. The third injection caused the expulsion of a quantity of gas, when the abdominal pain diminished in intensity. During the fourth injection the patient was suddenly seized with a desire for stool, passed considerable hard fæcal matter, and succeeded in evacuating the intestine entirely after three hours. A cup of tea, with brandy, and an ounce of castor oil, terminated the treatment.

Atropine and Morphinism.—Koch, in *Therapeutische Monatshefte*, records the case of a patient who frequently indulged in morphine, and to whom on five occasions he administered subcutaneous doses of Atropine as an antidote. It always quickly arrested the profuse secretion from the skin, air-passages, and intestine; also considerably diminished unpleasant results due to the abstinence from morphine, thereby assisting in gradual discontinuance of the narcotic. One three-hundredth part of a grain of the sulphate is given at first, the patient being watched for several hours. A second dose is given if necessary.—*British Medical Journal.*

Adonis Vernalis.—This remedy acts on the heart as a stimulant and tonic in small doses; acts also upon the kidneys—hence is a remedy for a weak heart with dropsy. In valvular insufficiency, with regurgitation at the aortic or mitral valve, and in cases of valvular disease accompanied with dropsy, Adonis is one of the most trustworthy remedies. It promptly quiets functional cardiac affections, and its tonic effect extends to the entire circulation. It vomits and purges severely when given in overdoses.—I. J. M. Goss, M.D., in *Georgia Eclectic.*

Periodical Neuralgia.—In the *Medical Record* Doctor Thompson declares he rarely fails to arrest attacks of periodical neuralgia, even of long standing, by means of fluid extract of ergot combined with an equal quantity of elixir of cinchona. Two teaspoonfuls

of this mixture should be taken in water as soon as the premonitory symptoms are noticed, the patient to lie down and keep quiet. The remedy is to be repeated at intervals of an hour if necessary. It has also proved efficient in the treatment of migraine.

Normal Liquid Ergot.—Just after the third stage of labor this drug is rarely ever out of place, especially if there is a suspicion of the smallest particle of membrane or placenta being retained. It should be given in moderate doses until after the fifth or sixth day following labor, since it contracts the uterine blood-vessels and makes the absorption of decayed material much less probable. It is safe to say that physicians will meet with fewer misfortunes who do not use Ergot before the third stage of labor.—*Medical Progress.*

Apocynum Cannabinum.—Doctor Gliski has discovered this drug is of value as a cardiac tonic, and that a substance can be segregated from the root which acts similarly to digitalis without cumulative effects. When the heart is dilated it rapidly lessens the area of cardiac dullness; it increases the daily secretion of urine, and removes dyspnœa, palpitation, anasarca, and ascites. In cases where adonis vernalis, convallaria, strophanthus, and digitalis proved useless, Canadian Hemp produced an immediate effect.

The Dose of Santonin.—Doctor D. H. Bergey has often made use of ten-grain doses of this drug for its emmenagogue effects, and has never learned of the slightest discomfort from such a dose. He rarely administers more than a single dose, and if more is required waits twenty-four hours before repeating it. He does not believe it is possible to produce a miscarriage or an abortion by it, but it is a safe remedy to use for suppressed menstruation.—*American Journal of the Medical Sciences.*

Chronic Rheumatism of Children.—Jules Simon declares that Normal Liquid Colchicum is the most efficacious remedy in the chronic rheumatism of children. He prefers it to iodides, and follows with tonics such as arsenic, phosphates, etc. Under this treatment, he declares, the swelling of the joints rapidly diminishes, though the general condition is not affected so quickly. There is no objection, however, to alternating Colchicum with the iodides if so desired.

Creosote in a New Rôle.—Doctor Cornett, of Madison, Indiana, finds that paroxysmal tachycardia is readily relieved by the use three times per day of Beechwood Creosote. Since rapid heart action and great vasomotor disturbances are incident to phthisis, and since these symptoms are often ameliorated under creosote treatment, it would appear that this drug would be available in tachycardia from any cause.

Rectal Feeding.—Doctor Brown reports a case of cancer of the stomach sustained for forty-three days per rectum. Milk was tried, but became sour and caused an accumulation of gas, consequently was discontinued after the first week. The main dependence was upon beef-tea and whiskey. It was found necessary to give four nutrient enemata in the twenty-four hours.

Treatment of Chorea by Arsenic Hypodermatically.—The injection of a five-per cent. solution of Arseniate of Sodium was given once daily, beginning with twelve minims and increasing the dose each day by one minim. The patient was practically well in ten days, after receiving nine injections, the last one consisting of twenty minims.—*Archives of Pediatrics.*

Management of Sycosis.—Clip the beard very close, when an excellent soothing application is Lassar's paste, made as follows: Starch and zinc oxide, each two drachms; salicylic acid, fifteen greens; vaselin, one ounce. Before application, the crust should be removed by soaking with oil and washing with soap and water.

Hair Tonic.—The *Texas Health Journal* says an excellent hair tonic may be made by scalding two ounces of Oolong tea in a gallon of boiling water, straining, and adding three ounces of glycerin, four drachms tincture of cantharides, and one quart of bay rum. After mixing, perfume to suit.

Cholera Infantum.—Doctor Septienm Manuel, of Queretaro, Mexico, reduces treatment to the three following precepts: To suppress all nourishment and medicine for one or two days: To give at discretion pure cold water: To return by degrees to a rational regimen.—*Archives of Pediatrics.*

Night Sweats.—Doctor Olsyewski declares that in seventy-three cases of tuberculosis he obtained relief from night sweats by the administration of Fluid Extract Hydrastis Canadensis. He recommends that it be given not alone at night, but at least twice besides during the day.

Local Anæsthesia.—A mixture of ten parts of chloroform, fifteen parts of ether, and one part of menthol, used as a spray, is recommended as an excellent and prompt means for obtaining local anæsthesia lasting for about five minutes.—*Boston Medical and Surgical Journal.*

Insect Bites.—

℞ Ammonia water, 45 minims.
Collodion, 15 minims.
Salicylic acid, 1½ grains.

One drop to be applied to each spot affected.

—*Journal de Pharmacie et de Chimie.*

Double Gold Salt in Paralysis.—Chloride of Gold and Sodium in pills or granules, given in dose from two milligrammes to three centigrammes, improves the general condition of paralytics in the first and second periods.—BOUBILA.

Diphtheria and Scarlet Fever.—Doctor John W. Tiffany recommends the use of Black Sampson (*Echinacea angustifolia*) as a most effective remedy in the treatment of both diphtheria and scarlet fever.

Whooping-Cough.—Analgesin is said to be almost a specific. An equally valuable remedy is fluid extract eucalyptus, which is not unpleasant to take when combined with extract of liquorice.

Normal Liquid Cimicifuga.—Doctor Boardman Reed says that ten to thirty drops of normal liquid Black Cohosh after meals will rarely fail to effect a cure of seminal emissions.

Obtundent for Sensitive Dentine.—

Cocaine, 5 grains.
Chloroform, ½ drachm.
Hydrochloric acid, 10 minims.
Alcohol, 2 grammes.

Singultus.—Valerianate of ether is claimed to be a specific in persistent hiccough.

Medical Progress.

SEWER GAS AND TYPHOID FEVER.—It is now more than thirty years since two eminent physicians discussed, with some heat, in the columns of the medical papers and elsewhere, their theories on the origin and distribution of typhoid fever. While Doctor Murchison and his party regarded the exhalations from drains as the *specific cause* of typhoid, Doctor Budd and his supporters argued that the gases from putrid liquids were only capable of producing this disease in the presence of some particular contagion. The discussion was taken up on the Continent, and the sewer-gas theory was vigorously fought over, but towards 1880 the whole subject was revived, and its supporters were later confronted with the results of bacteriological investigations on sewer-air, which showed that there were not more organisms present in drains than in the outside air, and that, under normal conditions, currents of air were unable to detach disease microbes, should they be present, from the effete materials in the sewer.

Meanwhile English hygienic authorities, withont waiting for the scientists to make up their minds on this crucial question, preferred to act, at any rate, on the assumption, supported as it was by much experience and many facts, that the exhalations from drains were undesirable and dangerous in our houses and surroundings, and should be rigorously excluded. The advance in sanitation, and its splendid results during the past ten years or so, is a sufficient testimony to the wisdom of the agitation which determined the crusade against bad drainage and unsanitary appliances in this country.

But the inquiring spirit of the scientist, which abhors blind empiricism, and seeks always to reach the root of the matter, has again been exercising itself on the question of the spread of disease by sewer-gas, and it is significant that in the most recent report to hand on sewer-air the direct connection of the latter with the distribution of zymotic disease is declared to be still wrapped in mystery and uncertainty, and we find our precise and scientific information on this subject as meagre as it was some thirty years ago. All the more important and welcome, therefore, are some very original investigations which have just been published by Doctor Alessi, who has not contented himself with finding very few and harmless microbes in sewer air, but has submitted the whole question of its relation to typhoid fever to a searching experimental inquiry.

For this purpose the effect of inhaling sewer-air and the gases from putrefying materials was examined on animals—rats, rabbits, and guinea-pigs being selected. After exposure to sewer-air, which was accomplished by placing them in a box with a perforated bottom communicating directly with a drain, they were inoculated with a small quantity of only a slightly virulent cultivation of the typhoid bacillus; whilst other animals were similarly treated, except that they were not compelled to inhale these noxious gases, but were kept in their ordinary surroundings. The rats, after inhaling this foul air, began to lose their vivacity, and after a time grew thin, although they ate voraciously, and out of forty-nine which were inoculated with typhoid germs thirty-seven died exhibiting the typical symptoms of typhoid infection. Of those forty-one rats, however, which, although infected with typhoid, had not inhaled sewer-air, only three succumbed. Thus the inspiration of drain-air had so far predisposed these animals to infection from typhoid that a small dose of an almost harmless growth of this organism proved very fatal to them. Guinea-pigs and rabbits exposed in like manner to gases from materials in a condition of active decomposition also acquired a predisposition to typhoid infection, for out of seventy-two guinea-pigs inoculated, fifty-seven died, whilst not one of those treated with typhoid germs in ordinary surroundings succumbed. Every one of the eleven rabbits similarly treated died, but not one of the inoculated animals kept in ordinary surroundings. Doctor Alessi also found that the inhalation of these gases from putrid substances enabled a small dose of a weakened culture of the *Bacillus coli communis*, normally present in the intestine, to produce fatal results when purposely introduced into the animals thus exposed.

It was also ascertained that it was during the first two weeks of exposure to these noxious gases that the animals were most easily predisposed to typhoidal infection, for no less than ninety per cent. of all the animals inoculated during the first fortnight died, whilst seventy-six per cent. succumbed of those inoculated in the third week. This fact may, says Doctor Alessi, partly explain how it is that some people who habitually breathe contaminated air do not appear to suffer any evil results, having gradually in course of time become accustomed to it, whilst a stranger exposed to the same conditions without previous experience may suffer very severely. The degree of predisposition, however, whilst varying in different animals, would also vary in different people.

These investigations must be regarded as a noteworthy and important contribution to our knowledge of the distribution of disease, affording as they do so remarkable an experimental confirmation of the wisdom of a policy of sanitation dictated by instinct and intuition.—*Nature.*

THE REHABILITATION OF CALOMEL.—Recent discussion in our medical societies points to the awakening of the profession to the value of the historical element in therapeutics. The instability of remedies employed in various epochs of medical history has long been an opprobrium. Just as in the more primitive periods prominent men like Hippocrates, Celsus, Galen and Antonius Musa founded schools whose doctrines governed practice, so in later periods the dogmatic doctrine of some occupant of a professorial chair gave the cue to conception of diseases and to the remedies applied against them. These men, having a large following whose reverence for authority exceeded their individual judgment, prevented broad and profitable discussion, which would have been regarded as iconoclastic and subversive of high authority. In more recent times the republican idea has invaded the ranks of medical men, with the result that we are now threatened with a reversal of extremes. From all sides and sources come positive opinions, theories, and modes of practice. Men who have scarcely escaped from the swaddling clothes of medical training vie with those of riper years and experience in the effort to increase the line of medical knowledge, or at least the line of medical opinion. Consequently we are threatened with an *embana des richesses*, bewildering by its immensity and contradictory character.

It is, indeed, high time to pause and reflect whither the profession is drifting—to ascertain what remedies have proven by their retention in the physician's armamentarium their worthiness of confidence. In a late discussion on the subject in the Section on Practice of the New York Academy of Medicine it was brought out that the only remedies which have survived from the days of Hippocrates are diet, exercise, baths, and climate. Throughout all the fluctuations of opinion resulting in the building up of sects and pathies, these remedies have remained unscathed. Of remedies discovered in more recent times, many, like mercury, veratrum viride, opium, and others of lesser importance, have risen and fallen upon the wave of professional opinion, until but little is left of them except their value as symptomatic agents.

One of these remedies stands out in bold relief.

Time was when Calomel was the sheet anchor in many, indeed in most, acute diseases. This view was shared by men like Geo. B. Wood of Philadelphia, Eli Geddings of Charleston, Thos. Watson of England, and, indeed, the large majority of teachers of practice. To "clear the primæ viæ" was the watchword, and right faithfully did those who, like the writer, received their medical training from these practical and most capable teachers, ply this noble drug. But a reaction came. To the writer the awakening was rather abrupt and surprising. As a surgeon in the Southern army, he had ample opportunity to observe the good effects of a full dose of Calomel in preparing the system for battling with acute diseases. When, as a prisoner of war at Gettysburg, he was ordered by the genial medical director of the Union forces to make requisition for medical supplies, he looked in vain for his favorite drug. Calomel was tabooed, banished from the printed form of supplies. A visit to this medical centre a few years later revealed the fact that in civil practice also Calomel had lost caste and was avoided by the rising young men of the day as a dangerous remedy. Ptyalism was the terrible bugbear of these post-bellum teachers. This prejudice continued for many years. But, *tempora mutantur*, to-day Calomel has again risen into favor.

Some of the very men who formerly twitted the writer upon his "Southern therapeutic proclivities" advocate now its free use. Eminent teachers advise it in twenty-grain doses in pneumonia, in ten-grain doses in typhoid fever, in which we were taught thirty years ago it was dangerous. But the drug is no longer used to "act on the liver" or to "clear the primæ viæ." The latter-day doctor would fain be more scientific, *i.e.*, more exact (?) in his account of its rationale. "Calomel removes the nidus for and the products of bacteria." Now we see our old friend rehabilitated in a new dress, whose comeliness appeals more to the fancy of the profession, and leads us to forget our former prejudices. As an antiseptic of the gastro-intestinal canal, Calomel has some value. Its efficiency in the earlier stages of typhoid, in diphtheria, follicular tonsillitis, influenza, and other mildly infectious diseases, demonstrates this clinically. Not the least claim of Calomel to prevalence as a purgative is its tastelessness and capacity to be retained in irritable conditions of the stomach.

The danger of salivation would appear to be remote. In small doses this danger is rare, as may be readily discovered from the writings of Wood, Watson, and others. In large cathartic doses this danger is mythical, and so occurs only in those possessing an idiosyncrasy. It is fortunate for the ill that the action of Calomel is explicable theoretically upon the modern antiseptic idea. The rehabilitation of this drug is a happy augury of the supremacy of practical ideas in therapeutics.—*Gaillard's Medical Journal.*

THE PATHOLOGY OF SCARLATINA.—Opinion at the present among those engaged in the study of this disease would seem to be tending decisively towards the throat, and more especially the tonsils, as the primary seat of the scarlatina virus. This is the view brought forward by Doctor Dowson in a most able thesis delivered at Cambridge, and the same view is being expressed by bacteriologists who, like Doctor Berge, look upon the disease as due to the local action of a streptococcus. The affection of the tonsils, according to these observers, precedes (as we think has been and must be generally acknowledged) the appearance of the rash; it is a matter of common knowledge that during epidemics of scarlatina, or in households where one or more members are prostrated by the disease, cases may occur of sore throat simulating that of the fully developed malady, but unaccompanied by any cutaneous eruption, and many observers hold that such sore throats are distinctly infectious. Whether here we have to deal with the action of a streptococcus resembling that of erysipelas, if not a variety of the same, as Berge holds, is a matter that has still to be confirmed. There is, however, not a little truth in the contentions of this observer that the complications of the disease are frequently associated with the presence and action of streptococci, that there is a curious connection between scarlatina and puerperal septicæmia (this being frequently due to a streptococcus), and that there is a similarity between the scarlatinal and erysipelatous erythemata. It may be, however, not that the disease is due to a streptococcus, but that it predisposes to the invasion of the tissues by this micro-organism. It is premature, as yet, to make any absolute statement upon this matter.

Be this as it may, there would seem to be not a little force in the suggestion that in the tonsils is to be found the prime seat of scarlatina, and the practitioner may, we think, be safely recommended to observe whether attention to the conditions of these organs in the earlier states of the disease leads to an

amelioration of the symptoms. *A priori*, it is not to be expected that mild antiseptic lotions applied to the tonsils should cut short the course of the disease, but it is not impossible that the treatment suggested might lessen the incidence of pulmonary and other complications, and might give to the malady a milder character.—*Montreal Medical Journal.*

CAUSES OF SEXUAL DEBILITY IN THE MALE.—Doctor F. R. Sturgis says: The cases which are marked by imperfect erections and by premature emissions are usually, if not entirely, due to hyeræsthesia of some portion of the urethra: Masturbation has very little if anything to do with it, beyond the fact that if indulged in to excess it may induce a tendency towards this hyperæsthetic condition, but this is no more marked in masturbators than in those persons who indulge to excess in the venereal act: Organic stricture has little, if anything, to do with it, but associated with this hyperæsthetic condition there is an irritable condition of the canal which produces spasmodic contractions of the urethra upon attempt to pass instruments, oftentimes during the first act of micturition and at the time of connection: Varicocele plays no unimportant part in these cases: Neuralgia of the testis, if a cause of this disease, induces it merely as a secondary consequence to the pain which is one of the distinguishing features of the neuralgia: Tuberculosis, syphilis and gonorrhœa may also play their part, and should all be reckoned with in summing up the causes which may induce this peculiar and depressing condition of affairs.—*Canada Lancet.*

THE BACILLUS OF LEPROSY.—Campana, who has long experimented with the bacillus of leprosy, believes he has succeeded in cultivating it. He describes the organism as similar to the bacillus of leprosy; it is one-third to one-half of the diameter of the red corpuscle of human blood—that is, it is from two to four micromillimeters in length, the breadth at the thickest parts being one-fifth to one eighth of its length; usually straight, but in rare instances somewhat flexed. When stained, the protoplasm is homogeneous, but sometimes interrupted by minute points clearer than the rest. It thrives most luxuriantly at a temperature of 37° to 37.5° C. Treated with fuchsin and nitric acid, it retains the red coloration until placed in the second stain, which takes the place of the first.—*Riforma Medica.*

LATE ERUPTION OF TEETH.—Recently were published the details of a case recorded by Doctor Weil, in which a canine tooth was not erupted until after the sixtieth year. Another remarkable instance of late eruption has been noticed by Doctor Beadnell Gill. A lady, eighty-three years of age, was wearing an upper and lower denture; and the latter required altering in consequence of the eruption of the two lower wisdom-teeth. This did not complete the tale of the patient's woe, for the upper case has now become uncomfortable in consequence of a supernumerary tooth appearing in the place originally occupied by the left upper central. It is a peg-shaped tooth about the size of half a bicuspid, and the bone around is very dense.—*British Journal of Dental Science.*

FŒTAL MONSTER.—Rousseau, in *Annales de Gynécologie et d'Obstétrique*, describes a monosomian monster. The mother was a multipara. The period of gestation passed normally; labor continued over twenty-four hours without progress. It was found necessary to perforate the cranium to deliver. There were two sets of cranial bones with a single face. The single eye was the size of a nut, oval, and bore two corneæ and two irides absolutely distinct. Rousseau classes it as a new variety—*craniodidymus.*

EFFECTS OF URINE ON THE HEART.—Lusini, experimenting upon frogs, found that normal urine applied to the heart always causes an increase in extent of the individual heart-beats. The urine passed in disease produces toxic effects proportional to the increase of urea, salts, coloring matter, extractives, etc., as well as abnormal matters. The urine of infective disease is far more toxic than that of other common maladies, which is apparently due to the presence of leucomaines.

ARCUS SENILIS.—Arcus senilis, or the ring of old age, is a fatty degeneration of the cornea just within its border. Strictly speaking, it might be called pathological, but as this condition is common to all at an advanced age, and does not injure the sight, it might also be called normal. It begins first in the upper section of the cornea, then in the lower, and the two crescents in time join. It is of a deep gray color, and is most noticeable in eyes with dark irides.—*Eclectic Medical Journal.*

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Original Articles.

CHRONIC TYMPANIC VERTIGO: ITS RELIEF BY SURGICAL LIBERATION OF THE STAPES.*

BY CHARLES HENRY BURNETT, M.D.

Inspection of the mechanism of the conductors of sound in the ear, reveals an arrangement peculiarly well adapted to carry the stapes inward toward the labyrinth. Such inward excursion of the ossicles is in fact made in every normal ear with every wave of sound falling on it. That a limit to this inward motion of the stapes is desirable is shown by the presence of the stapedius muscle, the antagonist of the tensor tympani. The latter muscle draws the malleus inward and aids it to force inward the incus and mediately the stapes. If abnormal retraction in the conductors ensues from any cause, the stapes, being the weakest of the conductors of sound, is forced unduly into the oval window, excessive pressure is thus exercised upon the labyrinth fluid, the motor filaments of the auditory nerve are irritated, and vertigo is the result.

If such morbid retraction in the conductors of sound is of frequent and prolonged occurrence, as in chronic catarrh of the middle ear, *chronic vertigo* may be added to the tinnitus and deafness already present.

For such phenomena of disturbed equilibration, in chronic catarrh of the middle ear, I have suggested the name of *Chronic tympanic vertigo.* The term "Ménière's disease" has been usually applied to this affection; but this is a misnomer, for Ménière's disease, if it means anything, means a disease of the labyrinth occurring in a previously normal ear,† and not a disease of the middle ear.

Chronic tympanic vertigo usually occurs in an ear which has been for some time previous the seat of tinnitus and deafness from a chronic catarrhal process in the drum cavity. The nares and naso-pharynx usually show by this time no disease, though the catarrhal process may have started there. The membrana tympani will be found markedly and continuously retracted, and the stapes therefore unduly pressed into the oval window and held there by the overpowering weight and force of the malleus and incus.

A characteristic feature of chronic tympanic vertigo is its paroxysmal occurrence. This is due to the fact that the labyrinth tolerates to some extent the chronic pressure of the stapes; but a change in the circulation in the middle ear, in varying conditions of health of the patient, brings about increased retraction in the already retracted ossicles, undue inward pressure of the stapes ensues, and a paroxysm of vertigo of longer or shorter duration sets in. The same phenomena appear when the quantity of lymph in the labyrinth is increased in a general afflux of lymph to the head, in a case where the labyrinth-space is compromised by a chronically impacted stapes. The paroxysmal nature of chronic tympanic vertigo distinguishes it from the vertigo caused by a tumor in or near the auditory nerve, which is always constant though it may be slight. Retention of consciousness even in the worst cases, where the patients reel and fall, serves to distinguish tympanic vertigo from epilepsy and apoplexy—though it is unfortunately too often mistaken for these maladies.

The only way to relieve chronic tympanic vertigo and the tinnitus and deafness always attending it, is to liberate the stapes. This is best accomplished by elimination of the incus from the retracted chain of ossicles. Thus the power of the retractive lever is overcome; and the stapedius, relieved of its forceful antagonist, the tensor tympani, lends assistance in drawing the stapes from the oval window, and the morbidly impacted

* Read at the meeting of the American Otological Society, Washington, D. C., May 29th, 1894.

† *Gazette Médicale de Paris*, page 587, September 21st, 1861.

bonelet is liberated. That morbid retraction of the conductors of sound and impaction of the stapes are the cause of chronic tympanic vertigo, and that this disease is relievable by removal of the incus, is amply demonstrated by the following cases, which are the latest in a series of twenty similar ones:

Case 17 (in a series of twenty).*—Mrs. K——, age 46, of Maryland, referred to me by Doctor S. Weir Mitchell, December, 1893. The patient had an attack of acute catarrh in the head over three years before the date of her first visit to me. Soon after the catarrh of the nares and naso-pharynx, tinnitus and dullness of hearing were observed in the left ear, and fifteen months later vertigo was felt, and attributed by the patient to the discomfort in her ear. She felt more or less vertigo all the time, became depressed in spirits, and suffered from more frequent and severe paroxysms of tympanic vertigo. These attacks numbered, at last, two or three a month, and made the patient unwilling to leave the house alone. Finally, after much treatment for nervous prostration, but none for her ear, the seat of the disease, the case was taken to Doctor Mitchell, who, recognizing the true nature of the disease, referred the sufferer to me.

Otoscopic examination revealed a thickened membrana on the left side; incus not visible through the membrane. Hearing much reduced. Nares normal.

Chronic tympanic vertigo, due to retraction of the ossicles and undue impaction of the stapes in the oval window, was diagnosticated, and the removal of the incus advised in order to liberate the stapes.

Consequently, though the patient was in a very nervous condition, she was etherized, January 23d, 1894, and the incus removed, after myringotomy in the upper posterior quadrant of the membrana.

January 24th: The patient can walk decidedly better and is very cheerful. Hearing unimproved and tinnitus unchanged. The patient goes home to-day.

Unfortunately this patient took cold on her way home, and seemed worse in every way for some time. By March 15th, however, when she came to see me, I found that the tinnitus was much less, there had been no paroxysms of intense vertigo for some weeks, and in fact the vertiginous tendency seemed permanently banished. The patient looked five years younger and was very active on her feet, being no longer in fear of vertigo and falling. Thus the object of the operation had been attained.

Case 18.—Mr. W. P——, of Philadelphia, aged 34 years, a clerk, consulted me January 29th, 1894, for tinnitus in the right ear, more or less paroxysmal in nature and culminating at times in vertigo.

Otoscopic examination of the right membrana revealed that the membrane was perforated below the manubrium, and through the heart-shaped opening the mucous membrane beyond gave evidence of having been the seat of chronic purulency. The rest of the membrana was thick and rigid, seemingly attached to the incus or its remnant, and lying against and pushing inward the stapes, which latter bone, however, was *not visible.*

The deafness in this ear was profound. For two months previous the tinnitus had been increasing in the right ear and the patient had experienced an unaccountable tendency to vertigo, which he supposed to be due to stomachic derangement. The exacerbations of vertigo became more frequent and more intense, until the patient was afraid to walk in the street alone, and at last in February he ceased to go to his business on account of disability induced by the tinnitus and tympanic vertigo.

It now became manifest that these disagreeable symptoms in the right ear were due to impaction of the stapes in the oval window. It was therefore proposed to liberate the stapes by cutting into the thickened upper posterior quadrant of the membrana tympani, and then removing the incus. The patient was etherized March 2d, 1894, and a wide incision made in the thick membrana. A piece of the long shaft of the incus (the only vestige of this bonelet) was found imbedded in the thickened membrana, and removed. This exposed and liberated the stapes, which was found to be *very movable.* Owing to the upward shrinking of the membrana, as I have observed in other cases of loss of the incus, from chronic suppuration, the stapes appeared relatively very low, nearly on a line with the lower end of the manubrium. The stapes is still plainly visible and readily movable. After the operation the vertiginous tendency diminished. In a week the patient was able to walk alone in the street, and he returned to business. The tinnitus grew less, but not as rapidly as the vertigo, which soon ceased entirely and has not returned. The hearing was not much improved.

In seven other cases of tympanotomy and

*Cases 1 to 10, *Medical News*, Phila., May 13th, 1893; Cases 11 and 12, *Medical News*, Sept. 30th, 1893; and Cases 13 to 16, *Medical News*, April 28th, 1894.

removal of the incus, I have found at the time of the operation mobility of the stapes, notwithstanding the usual symptoms of chronic catarrh of the middle ear. Tinnitus and vertigo have been relieved in all of these, but the deafness has remained *unchanged*, notwithstanding the persistent mobility of the stirrup. This I believe to be due to the fact that in these cases the proximal nerve-structures in the percipient organ—those nearest to the vascular structures of the middle ear and most readily affected by the catarrhal disease in the tympanum—are atrophied, while the distal nerve-tissues in the semicircular canals—those most remote from the chronic vascular changes in the drum-cavity—retain their functions and are impressed by impaction of the stapes.

Case 19.—Miss H. O——, of New York, forty-seven years old, had suffered from chronic catarrhal deafness and tinnitus for several years. Finally chronic tympanic vertigo had been developed. Otoscopic examination, March 14th, 1894, revealed a greatly retracted and thickened membrana tympani: incus not visible through the membrane. No hearing on this side. March 16th, the patient was etherized and myringotomy in upper posterior quadrant was performed. The incus-stapes connection could not be seen. The incus, however, was carefully disarticulated from the stapes, by means of an incus-hook-knife, and its long shaft drawn into view. The incus was adherent in the attic, and when traction to remove the bone was made, the long descending shaft broke off. The ear was then slightly stopped with boric-acid cotton. The patient went home in four days. No reaction occurred in the ear.

May 10th, 1894: The patient called to see me and reported much less tinnitus and a greatly diminished tendency to vertigo.

Case 20.—Mrs. C——, of Philadelphia, aged forty-seven years, consulted me regarding aural vertigo, April 2d, 1894. The patient stated that she had suffered from chronic catarrhal deafness and tinnitus, in both ears, for several years. Within four months the tinnitus in the right ear had greatly increased, and was so intense at times as to cause dizziness and faintness.

Otoscopic examination revealed a thickened membrana, retracted and forming a very obtuse angle with the posterior wall of the auditory canal. The incus could not be seen through the membrana. Chronic tympanic vertigo, from undue retraction and impaction of the stapes, was diagnosticated, and the patient was advised to submit to the removal of the incus, for which operation she had been, indeed, sent to me by Doctors Harlan and Eft. Therefore, on April 17th, 1894, the patient was etherized; and the incus, which was placed high in the attic, was removed with difficulty, because the manipulations in such a case must be excessively delicate and very slow for the sake of caution and gentleness.

The patient felt no relief of any kind for ten days; then the tinnitus diminished and there was much less tendency to vertigo.

The hearing in the left ear had by this time improved considerably: tuning-fork $\frac{8}{12}$, against nothing before the operation. She hears isolated words, too, much better—six inches before the operation; one to two feet now. The tongue is numb on top, from irritation of the chorda tympani.

April 30th: Tinnitus very slight and no tendency to dizziness or vertigo. Hears conversation much better in the right ear.

May 7th: The patient continues free from vertigo, notwithstanding a severe cold. Perforation in the membrana has been closed a month.

127 South Eighteenth Street,
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TREATMENT OF EPILEPSY BY SOLANUM CAROLINENSE.*

BY DOCTOR W. J. HERDMAN.

I have been prompted to make this the subject of a brief paper because idiopathic epilepsy is a disease so frequent in occurrence, distressing in nature, and so refractory to treatment, that the profession is constantly on the alert for some better remedy for it than has been hitherto discovered; also because this particular drug is to most of us wholly unknown, and, though it has so far failed to find a place in our dispensatories and pharmacopœias, is spoken of with such seeming assurance that the profession is anxious to learn the truth, in so far as can be discovered, concerning its nature and action.

Solanum Carolinense, of the natural order Solanaceæ, is popularly known as horse-nettle, bull-nettle, sand-brier, treadsoft, and poison or ground potato. It is a native of the South-eastern States, being abundant in Virginia, the Carolinas, and Florida; also found as

*Read before the Michigan State Medical Society.

far north as New York and Pennsylvania, and as far west as Iowa and Kansas.—I am credibly informed that in Western Kansas it infests the ground so thickly as to cause serious impediment to the farmers in the cultivation of the soil.

The root of the plant is perennial, while the hollow, erect-armed stem is annual, growing to a height of from one to two feet. It is branching, hirsute, with stout, straight, yellowish prickles, firm and almost scrubby at the base. Its leaves are from four to six inches in length, ovate, oblong, acute, sinuated-toothed or angled, armed on veins and petiole with yellow prickles, stellately pubescent, and are abruptly contracted into a short petiole of one-half to one-and-a-half inches in length. Racemes simple, soon lateral, opposite to and often longer than the leaves. The flowers, which appear in June, July, and August, have a pale-blue and white corolla and a five-parted acuminate calyx.

The berries, which ripen in October, are globose, two-celled, from one-fourth to one-third inch in diameter and of a lemon-yellow or greenish color when mature. When fresh they have a rank, wild odor, but when dried this is changed to a pleasant aromatic; they have a slightly bitter taste, with a tingling after-taste.

It seems to be generally agreed that the medicinal properties reside chiefly in the berries, although Doctor J. L. Napier* reports a case wherein a tincture of the root seemed to possess like influence; the various analyses that have been made also seem to evidence that alkaloidal substances are found in the leaves as well as in the berries and roots.

So far as I can learn, a thorough analysis of the berries has been attempted only by G. A. Krauss,† by Harry Kahn (at the School of Pharmacy of the University of Michigan),‡ and by J. U. Lloyd.§ The results are as follows:

Ash	6.68
Volatile oil	3.22
Fixed oil	9.75
Resin	2.81
Waxy matter	1.85
Organic acids and allies	4.18
Glucose	1.30
Extractive (containing alkaloidal matter)	18.36
Gum	3.02
Colored extractive and albuminoids	9.57
Inert coloring matter	1.73
Starch and allied substances	6.69
Sodium-hydroxide extractives	12.30
Cellulose	15.85
Loss	2.69
	100.00

Moisture in the fresh berries, 77.79 per cent.

Kahn did not succeed in isolating an alkaloid, but Krauss* subsequently established the presence of *Solanine*, and apparently also *Solanidine*. J. U. Lloyd also separated an alkaloid in considerable quantity from the roots of the plant, which may be identical with the second described by Krauss, for which (until its identity is fully determined) he proposes the name *Solnine*.

From the foregoing it would seem altogether probable that whatever remedial virtue belongs to preparations of this drug resides in alkaloidal constituents that have been discovered or remain to be discovered, since little else has been found to which a marked influence could be attributed; oils and organic acids are present in but small proportion. Attention is, therefore, first directed to these alkaloids with a view of discovering their physiological and therapeutic action, though little has yet been done, or at least published, in this direction.

Hausemann reports Solanine acts directly upon the motor and respiratory centres, depressing them, without any hypnotic or narcotic effect. In a pure state it does not irritate the intestines; if pushed to the extreme it causes death by carbon-dioxide poisoning. Solanidine is said to act in a similar manner but is less poisonous.

No physiological experimentation has yet been made, so far as I know, with the Solnine of Lloyd; but the effects which both Solanine and Solanidine seem to produce in depressing the activity of motor centres would indicate for them a therapeutic application to all forms of disorders attended by muscular spasms that is deserving of more extensive investigation, and upon such researches I am at present engaged.

With so little information extant regarding

* *Medical World*, 1889, page 327.

† *American Journal of Pharmacy*, 1890, page 106, and 1891, page 65.

‡ *American Journal of Pharmacy*, March, 1891.

§ *American Journal of Pharmacy*, April, 1894.

* *American Journal of Pharmacy*, 1891, page 216.

the alkaloidal principles, light must be gathered from reports made concerning the action of other preparations of the drug; and with a view of establishing some physiological criteria, six members of the senior medical class of the University of Michigan consented to experiment upon themselves, under my direction, with the fluid extract made by Parke, Davis & Co., for the period of two weeks. The experiment was preceded in each case by a few days of observation as to the action of the digestive system, pulse rate and quality, frequency of respirations, action of the kidneys, muscular power, nervous and mental conditions.

They then began with the maximum dose of the fluid extract, fifteen to twenty minims. For the first three or four days this dose had no appreciable effect, except to induce slight laxative action—it caused three or four moderately watery stools in the course of twenty-four hours, but was unattended by other discomfort.

This effect gradually diminished during the later stages of the experiment, yet a mildly laxative action was noticed in the majority of cases until the close. The instruction was to increase the dose ten minims each day until some abnormal action was produced, or until the dose reached 100 minims. This was done and the records faithfully kept.

Aside from the laxative effect mentioned, there was in all cases a notable lowering of temperature and diminished number of cardiac pulsations, while two records show diminished respirations. By the time the amount of sixty minims three times daily was reached, the temperature was lowered one per cent., and the cardiac pulsations were diminished in frequency twenty per cent.; the respirations, in those instances where any change was noticeable, were diminished in frequency twenty-five per cent. The pulse in one case, though slowed in action, was recorded as full and strong, while in another it was found to be feeble.

In one instance the drug was thought to act as a stomachic tonic. A slight frontal headache was attributed to its use by another, while one experimenter was decidedly of the opinion that it acted as a mere sedative and produced slight drowsiness. No effects on the kidneys or generative organs were observed. As far as these experiments with the fluid extract have determined anything, the results agree in the main with those recorded as due to the alkaloid Solanine: diminished cardiac action according with the sedative action on motor nerve centres, and the diminished respiratory action being due to the same direct central influence or possibly secondary to the slowed circulation.

I have not until recently been able to obtain a supply of the alkaloidal principles. I have employed the fluid extract therapeutically in five cases of "idiopathic" epilepsy, but in only one instance have I exceeded the maximum dose (fifteen to twenty minims) advised. The effect in these cases has not been very decided: in two of them no change whatever is noticeable, but in the remaining three the intervals between the attacks has increased and the severity of the attacks appears to have lessened. It is altogether probable that the dose advised is not sufficiently large to secure the desired effects, or that we are not as yet sufficiently familiar with the constituents of the plant and their period of development in its growth to produce an efficient extract.

The tincture is the preparation said to have been most frequently employed by those who have reported upon it. Doctor J. L. Napier,* of South Carolina, states that he prepares by bruising the berries and adding dilute alcohol, using berries enough to have a tincture saturated with the active principle; of this he gives one teaspoonful every three hours until drowsiness and symptoms of vertigo are produced, and then lengthens the interval between doses. In cases of epilepsy he instructs patients to begin with a teaspoonful three times daily, and gradually increase until the dose produces symptoms of vertigo, then lessen until this symptom subsides. He found this preparation therapeutically efficient in controlling epileptic convulsions attending painful menstruation; epileptic attacks associated with imperfect development; chorea, and puerperal eclampsia. Aside from this antispasmodic action he believes it to be an anodyne and a very active diuretic.

*Transactions of the State Medical Society of South Carolina, 1889

But it is Doctor A. G. Selman, of Indianapolis, who, apparently, has had the largest experience. He says:

I have used the tincture of the berries and a fluid extract of the root, and much prefer a concentrated tincture of the berries; the stomach tolerates it better, and the effect is more agreeable.

It is presumably a tincture of the berries that Doctor Selman prepares and is furnishing in such large quantities to members of the profession and others at $3.00 per pound. But, reading from the same reprint further on, we are left in some doubt when he says:*

It has only been four months since the remedy could be procured in sufficient quantities to give it anything like a trial or test, and many have purchased fluid extract of the root or herb, believing it to be the remedy I recommend, but in that they are mistaken. The *solanum* is not a nettle, neither does it belong to that family of plants.

After this decidedly negative statement, both as to his preparation and the nature of the plant from which it has been thought to be derived, we are favored with no positive information as to either, but are promptly furnished with the potent preparation, whatever it may be, at $3.00 a pound, to experiment for ourselves. This privilege, open to all, I have availed myself of, and in a number of suitable cases of epilepsy have made use of it in accordance with the directions furnished, but so far in these cases the results have been entirely negative. No effects, beneficial or otherwise, have, according to my observation, resulted from the use of the "Selman Tincture." Yet I have in no instance pushed it to the extent of causing vertigo and stupor, which are said by Doctor Selman, in accord with the statement of Doctor Napier, to be the full physiological effects of tincture of the berries. It would appear that such physiological effects are not always readily attainable, at least from moderate doses, since Selman states concerning his preparation:

It is not poisonous, as I have given from one to five tablespoonsful three or four times a day without any unpleasant effects.

Tinctures, as a rule, contain about fifty per cent. of spirits. These full doses, therefore, would subject the patient to the influence of two ounces or more of alcohol daily, which would of itself, in many cases, be responsible for the "dizziness and stupor" that are mentioned as the characteristic physiological effects which result from the full doses of this preparation. "Many cures," however, are claimed for this preparation of the drug, and as all those who have reported upon its use have not always employed heroic doses it seems altogether probable that some therapeutic influence has been at work that cannot be justly credited to the alcohol.

The manner in which the observations with the tincture have so far been made and presented to the profession is not calculated to create confidence in their value. But the notoriety which the plant has gained through advertisement has served to fix the attention of both the profession and laity upon it to a degree that will insure a thorough investigation of its nature and capacities. At the present stage of our knowledge concerning it we can only say that it gives promise, through its alkaloidal constituents, of furnishing us with a remedy for all manner of spasmodic disorders superior, in some respects, to any drug now included in our Pharmacopœia.

Ann Arbor, Mich.

* Page 6, reprint from *Medical Brief*.

SEVEN CASES OF LAPAROTOMY WITHOUT IRRIGATION OR DRAINAGE.*

BY E. W. SMITH, M.D.

While taking a special course in abdominal surgery, I have seen patients kept under an anæsthetic for twenty or thirty minutes while the operator and his assistants were getting things ready; this lessens the chance for recovery, since the shorter the period of anæsthesia the less the shock. The intestines should as far as possible be kept in the peritoneal cavity, and all unnecessary handling, dragging upon the mesentery, and exposure to the air be avoided. Likewise the operation should be finished as quickly as possible.

I am somewhat skeptical as to the good

* Read before the thirtieth annual meeting of the Indiana State Medical Association.

results obtained by irrigation and drainage in laparotomy. My experience teaches they should never be employed save when sepsis is suspected, or there is escape of pus, fæces or urine into the peritoneal cavity. With proper management after operation, the best results are obtained without irrigation or drainage, as I hope to show by the following cases operated on within the last year:

Case 1.—Mrs. L——, æt. 44, mother of two children, youngest 19 years, had abdomen enormously distended by an ovarian tumor of three years' growth. For the last year had great trouble with constipation of the bowels, which was overcome by putting the patient upon Parke, Davis & Co.'s Fluid Cascara Aromatic for one week. On May 28th, 1893, laparotomy was done, the incision being carried from the umbilicus down to within one inch of the symphysis pubis; the tumor was found densely adherent to the abdominal wall, and removal appeared almost an impossibility. The incision was extended upward four inches above the umbilicus, when by careful work I succeeded in freeing the tumor from extensive anterior attachment, and totally removing; it proved to be a multilocular growth of forty-two pounds. The abdominal cavity was now sponged out with hot carbolized water, torsion applied to all bleeding vessels (no ligatures used), and the wound completely closed by interrupted silkworm-gut sutures, each involving the skin, muscles, and peritoneum. On the second day the temperature reached 103° F.; on the third day it fell to normal, and there remained; pulse after the first day never exceeded 90. The wound was dressed with carbolized gauze, and not redressed until the fourth day, at which time it was looking well, having healed by first intention. On the ninth day she sat up to meals; on the twenty-first was at work as first cook in a restaurant, and has not missed a day since. She is now in the best of health and weighs more than ever before.

Case 2.—Mrs. A——, æt. 33, mother of five children, in February 1891 was injured in a street-car wreck; was unconscious for some time, and confined to bed for several weeks —an abscess of the left ovary formed, and not until its contents were discharged was she able to perform any work again. She suffered constantly with an offensive leucorrhœa that rapidly ran her down from a normal weight of one hundred and thirty to ninety-seven pounds. About a year after the accident she noticed the abdomen enlarging —could feel a hard lump on the left ovary, —and came to me for examination, when was diagnosed a fibroid tumor the size of a large orange. On June 7th, 1893, laparotomy was performed, and a firmly adherent fibroid, together with a cyst containing about eight ounces of fœtid pus, removed. Hæmorrhage was controlled by torsion, the abdominal cavity sponged with hot carbolized water, and the external wound closed with silkworm-gut sutures. Recovery was steady and rapid; temperature never above normal after the first twelve hours. Is now enjoying the best of health, and weighs one hundred and fifty pounds.

Case 3.—September 19th, 1893, a colored boy, æt. 14, was stabbed in the abdomen, when he walked seven squares to my office, every step leaving a footprint of blood. The wound was one inch to the right of the median line, two inches below the umbilicus, and two inches in length. The incision was enlarged to about five inches, a half-pint of clotted blood removed, and the cavity sponged out as in the preceding cases; finally the wound was closed with silk sutures and dressed with carbolized gauze. Immediately after the operation he was placed in an ambulance and taken to his home five squares away. Temperature on the evening of the second day reached 101°, after which it returned to normal and there remained; pulse never exceeded 90. No food was given by mouth for four days—instead, beef-tea and milk by enema. Dressing removed the tenth day. Convalescence was rapid, and patient was discharged well at the expiration of a fortnight.

Case 4.—B. S——, Italian coal-miner, æt. 20, received a wound in a drunken fight; was left for dead, and lay unconscious all night on a slack pile. I saw him the next morning at 10 A.M.; found he had lost considerable blood, but with very good pulse; temperature 100°. Examination revealed a penetrating wound three inches long, one inch to the right of the umbilicus, with about ten inches of omentum and intestines protruding and covered with coal-dust—they were very dark even after being cleansed, owing to long exposure to air. After succumbing to the anæsthetic he was washed with hot carbolized water, the wound enlarged to about six inches, the cavity sponged out, and the intestines examined; it was found the latter had been punctured, leaving a slit about three inches in length—which I closed; at the same time I removed six inches of omentum that had been ground up in the dirt. After again sponging out the abdominal cavity with hot water, the wound was closed, and carbolized gauze applied, the dressing being left undisturbed for four days. The patient

reacted well; temperature at 8 P.M., 102°, pulse 90; twenty-four hours after the operation, temperature 103°—was delirious during the first twelve hours, but after the second day temperature fell to normal and there remained. No food was given for four days, and the bowels were also kept in subjection by opium for twenty-four hours longer, when was given a full dose of Parke, Davis & Co.'s Fluid Cascara Aromatic, which induced abundant catharsis. A good recovery was made, he being discharged on the twentieth day. A few days since he declared he was "as good as new."

Case 5.—Mrs. T——, æt. 49, a slim, blonde woman, had always been healthy until within two years, when she noticed the abdomen enlarging; the enlargement continued up to the date of operation. A cystic tumor was diagnosed about the size of full-term pregnancy. February 9th, 1894, I removed this tumor, which presented but few adhesions. The abdominal cavity was flushed with hot carbolized water, and the wound closed with silkworm-gut sutures. Patient made a quick recovery, and was discharged on the fifteenth day.

Case 6.—Mrs. S——, æt. 34, mother of four children, youngest four years of age, had never been well since her last confinement, and had menstruated but once since that time, viz., eighteen months later; imagined she was pregnant, as the abdomen was enlarging, and not until ten months had elapsed did she become convinced to the contrary when the abdomen was much larger than a full-term pregnancy. On opening the abdomen, February 24th, 1894, a large cystic tumor of the left ovary, containing about two gallons of very thick greenish fluid, was removed. On the right ovary also was found a second tumor, about the size of a cocoanut, containing eight ounces of fœtid pus. With the conclusion of the operation the abdominal cavity was sponged out, and the wound closed with silk sutures. Temperature reached 103° twelve hours later, but with the lapse of another twelve hours it returned to normal. The patient made a quick recovery, and was discharged on the seventeenth day.

Case 7.—Widow, æt. 25, had a cystic tumor in the abdomen, which latter was distended to about the size of a six months' pregnancy. January 23d, 1894, I exposed a broad-ligament cyst, tapped, and removed after dividing the peritoneum covering it. Hæmorrhage was arrested by torsion as fast as each bleeding point was exposed. The cavity was sponged and closed as in former cases. The patient recovered so rapidly as to sit up on the seventh day to meals; was allowed to go home on the twelfth day, since when she has been in the best of health.

Terre Haute, Indiana.

RESPONSIBILITY AND RELATION OF THE GENERAL PRACTITIONER TO GYNÆCOLOGY.*

BY R. R. KIME, M.D.

To properly prepare for special work in gynæcology requires years of practical experience in general medicine and obstetrics. The most successful practitioner is one who seeks to know and eliminate as far as possible the cause of disease.

The conditions requiring gynæcological work are so intimately blended with the work of the general practitioner that to seek the cause we must in most instances enter the realms of general practice. If the general practitioner would urge the necessity of proper development of women morally, intellectually, and physically, and see that they had proper attention during the performance of their normal functions, there would be but little demand for the gynæcologist.

When one investigates the cause of disease and injury to the female genitalia, he is inclined to say that the work of the gynæcologist consists largely in correcting the effects of diseases and injuries many of which might have been prevented by the general practitioner.

In gynæcological work it is not so often a question of eliminating the primal cause of disease as it is to correct the results of antecedent causes. To illustrate: Pyosalpinx is not a primal cause, but the result of a previous inflammation, simple, infectious or specific. Pelvic peritonitis in the female is not idiopathic, but the result of diseased conditions elsewhere. Subinvolution accompanied with endometritis, displacement, etc., is the result of defective involution of generative organs after labor or abortion. Lacerations are but solutions of continuity, and lead to other complications. Other instances might be mentioned, but these I deem sufficient to demonstrate that the general practitioner has to deal more frequently with the cause, and the gynæcologist with the effect, of disease

* Read before the Georgia State Medical Society.

and injury to the female genitalia. He who prevents disease is a greater benefactor to the human race than he whose only province is to cure disease.

It is the province, even the duty, of every general practitioner to prevent many of the diseases and injuries peculiar to the female; failing to do so, he is culpably negligent and derelict of his duty, for which he should be responsible at least before the court of his own conscience. The true family physician is the trusted friend and confidential adviser whose counsel is often sought in regard to the daughter who is soon to bud and blossom into that being—"the noblest gift to man"—a fully developed, pure woman. Thus he is often in a position to wield an influence in the development of the daughter physically, morally, and intellectually. Who of all professional men should be better prepared to give advice or counsel as to the habits, customs, dress, training and environments in which a girl should be reared to attain that for which she was created? To fulfill such functions the general practitioner should be properly qualified and competent, as well as a man morally.

It may be asked, what has the physician to do with the moral development of the young? Certainly he should have much to do with it by advice and precept, and often has a greater influence for good or evil than he knows of. An immoral man or woman can never attain perfection physically, intellectually, or spiritually. Immorality tends to the development of disease, mental aberrations, hereditary traits and taints transmissible from one generation to another.—Can pure water flow from a mudhole or a stagnant pond? Can anything be purer than the fountain from which it came, except it be purified by forces not inherent in its origin? Then it certainly is the duty of the profession of to-day to purify so far as lies within its power (by advice and example) the fountain from which generations will flow in the future.

I am glad to know that immorality, profanity and drunkenness are no longer considered marks of distinction and evidences of fitness for the practice of medicine, and that the *morale* of the medical profession is at a higher standard to-day than it ever has been in the past; not only so, but, by education of the public, empiricism, quackery and superstition are rapidly vanishing in the presence of scientific medicine. Georgia is fast falling into the line of march and will soon have the needed legislation to exclude the charlatans and elevate the standard of the medical profession to where it should be. Every true physician whose conscience is not perverted, or whose judgment is not biased, must admit that the greatest curse to humanity and cause of disease is immorality: No one can doubt this that knows the results of gonorrhœa in the male and its sequelæ when transmitted to the female; of syphilis, which numbers its victims by the thousands; of inebriety, that is no respector of persons; and of the numerous lesser vices producing results in proportion to their indulgence.

In view of these facts, it is time the profession should teach and practice morals as well as medicine, if not from a sense of honor and duty, at least for the good of humanity and the sake of the profession, thereby lessening disease and suffering and securing a higher standard of development of the human race. The relation of immorality to disease is typically exemplified in gonorrhœa. A young man contracts the disease, and is treated by his family physician, who fails to inform him of the serious results in the female; or it may be the young man calls after being dismissed, to inquire if there is any risk in getting married. The physician, after a few questions or examination of the virile organ, gives consent to marriage, and then—who suffers? Alas! not the guilty physician or lover, but the innocent woman. She receives worse than a poisoned dagger from him whom she loves and adores and who has promised protection and comfort. The result is disease, often invalidism, sterility, and suffering—for which the innocent woman is censured by her spouse, and moreover frequently forsaken for more enjoyable amorous companions. As a reward for her marital fidelity she is stigmatized as "nervous," "hysterical," or possessed of "female weakness," "womb disease," etc. In due course of time, perhaps, she reaches the gynæcologist; cœliotomy is performed, adhesions broken up, diseased tubes and ovaries removed, and the result is a woman unsexed and the gynæcologist dubbed a "belly-ripper."

Who is responsible for all this? I say unhesitatingly, he who treated the young man or husband for gonorrhœa and *failed to warn him of the dangers of transmission to his wife.* He may plead ignorance, but that is no excuse in this day of medical progression; here "ignorance is not bliss" but a curse.—If I were a young man just about to cross the threshold of matrimony, I would rather a physician would enter my room at the midnight hour and relieve me of my hard-earned money than by his advice and counsel cause me to commit an act by which the health and happiness of my wife would be destroyed.

It certainly is the imperative duty of a physician to inform every male patient he treats for gonorrhœa of the dangers of transmission to the female, and its results. The general public, in cities especially, should be informed on this subject as well as of the prevalence and danger of syphilitic infection, thus preventing many of the diseases and conditions requiring the services of a gynæcologist.

Next in importance to the general practitioner is the subject of infection, for which he is often responsible directly or indirectly. It is now conceded by all that septic material conveyed to the parturient will produce septicæmia, that retained portions of the placenta and blood-clots are liable to decompose and infect the patient. When the infection is of a severe character it is readily recognized, as well as the sequelæ—disease of the tubes, ovaries, and uterus, with adhesions and disease of pelvic peritoneum. Every case of puerperal infection does not, however, necessarily mean severe constitutional disturbance with serious local complications and death, but we may have all grades from general peritonitis down to those conditions so light as to be scarcely recognizable.

The severity of the infection depends on the variety and activity of the virus introduced, as well as upon the resisting power and condition of the patient. Septic infection may involve only the endometrium (septic endometritis), or it may extend to the tubes, ovaries, lymphatics, blood-vessels, cellular tissue, and pelvic peritoneum, producing constitutional symptoms in proportion to the tissues involved and amount of septic material developed and absorbed. While putrid infection is less active and more insidious, it may involve the same tissues as septic infection, but usually with less immediate deleterious results. Being more insidious in character, it is more likely to leave behind unrecognized complications which in time cause the patient to seek the advice of a gynæcologist.

In most cases—not all—the physician or nurse is responsible for septic infection by conveying the septic virus, while in putrid infection it is often a result of faulty management of the parturient after labor. A thoroughly emptied, contracted, aseptic uterus, properly treated, is not likely to furnish a nidus for the development of putrid infection. To obtain and maintain this condition is the duty of the physician, which is a very difficult task—at times almost impossible. To leave behind portions of placenta or blood-clots in a flabby, relaxed uterus, is but to court this form of infection.

The expectant method of treating abortion, especially in cities, is but to invite putrid infection and add to the exchequer of the gynæcologist. In stout, muscular, well developed females, residing in salubrious country air, the retention of decidual or placental structures is not so deleterious and serious as to her less favored sister reared in in-door city life with vitiated air, a weakened nervous, muscular and digestive system, improperly developed or impaired generative organs, and a walking gonococci-generator for a husband.

These deleterious influences, with impure air, crowded population, closer proximity to all forms of infectious and venereal diseases, conspire to render the expectant treatment of abortion unwarrantable, in city practice at least. These are no hasty conclusions, but are based upon sixteen years of practical experience in country, town and city practice in both general and special lines of work.

The obstetrician's responsibility does not cease with the prevention of infection, but includes prevention of lacerations of cervix and perineum, as well as eliminating all causes tending to produce subinvolution of generative organs, if he would discharge his duty to his patient and lessen the demands

for the gynæcologist. It is impossible to prevent all lacerations, but by judicious treatment, giving time, etc., many lacerations can be prevented that would otherwise occur.

Where the physician fails to eliminate the causes of subinvolution, or immediately repair lacerations, time develops a host of complications that benefit no one except the gynæcologist.

Having cited some of the many instances in which the general practitioner may prevent disease and injury to the female and lessen gynæcological work, I will next endeavor to point out a few instances in which his duty is reversed, and for the sake of brevity will present them in the form of "don'ts."

Don't subject young virgins to the humiliation of an examination of generative organs unless there is positive evidence of pelvic disease which cannot be relieved by constitutional treatment:

Don't advise a young woman suffering with dysmenorrhœa and constitutional symptoms indicating local pelvic disease to get married, but send her to a gynæcologist if general treatment fails to give relief:

Don't tap ovarian cysts, but send patient to an operator:

Don't advise a woman with an ovarian cyst to wait until complications arise, but insist on early operation:

Don't use strong currents of electricity or puncture in uterine myo-fibromata, causing inflammatory complications with adhesions or pus-formation, endangering life of patient and adding to complications of operative measures:

Don't use force in replacing an adherent displaced uterus accompanied with diseased appendages:

Don't operate on a lacerated cervix accompanied with diseased appendages, extensive pelvic adhesions, endometritis, etc., but advise treatment of complications and in many cases the cervix will take care of itself:

Don't tell your patients that removal of the tubes and ovaries will always check the growth of fibroid tumors, establish the menopause, check functional neurotic conditions, relieve mental aberrations or epilepsy:

Don't forget that in these conditions each case must be studied from its individual peculiarities, the conditions traced closely from cause to effect before advising castration:

Don't dilate a cervix or curette a uterus except under aseptic conditions or with antiseptic precautions—then with extreme care where there is disease of tubes, ovaries, or pelvic peritoneum:

Don't forget to irrigate, disinfect and drain the uterus in puerperal infection if you would save the life of your patient and lessen the work of the gynæcologist:

Don't tell a woman near the menopause suffering with repeated hæmorrhages that it is simply "the change of life working upon her:"

Don't be guilty of causing procrastination in such cases until it is too late to do the patient any good, and cancer invasion seals her fate, and you receive the just censure of the patient and her friends:

Don't allow yourself to be lulled into the false hope that repeated hæmorrhages, watery discharges of offensive or non-offensive odor are accompaniments to the establishment of a normal menopause, for they are always indicative of disease and often of cancerous development:

Don't forget it is your duty to warn all such patients of the danger of such symptoms and advise them to consult a gynæcologist, else you will some day be indirectly responsible for the death of a patient:

Don't forget that a woman has a vermiform appendix which is subject to catarrhal or infectious inflammation, ulceration, and to disease from the presence of foreign bodies:

Don't advise operation in all cases of appendicitis, for many cases can be relieved by judicious medicinal treatment:

Don't forget to advise operation in all *severe* cases where medicinal treatment fails to relieve or benefit patient in first one to three days of attack, in all cases that suddenly grow worse with evidences of perforation after several days of improvement, in all relapsing cases, in all cases where abscess forms and after due time and treatment the pus is not absorbed:

Don't forget that if operation is performed in acute cases it should be done early, in relapsing cases during the interim, in symptoms of perforation at once before general peritonitis supervenes, if possible.

Atlanta, Georgia.

CONSERVATISM IN PELVIC SURGERY.

BY GEO. W. CALE, M.D., F.R.M.S.

The rapid strides which have been made during the last twenty years, and especially in the domain of pelvic surgery, have apparently so simplified the technique that operators, both old and young, in their wild enthusiasm to become record-makers and -breakers, oftentimes seem to have little or no regard for human life. This is so evident, that generally throughout the land there is increasing protest from honest and conservative men against the useless and even criminal mutilation of women by ignorant and unscrupulous operators. Cases of cœliotomy utterly devoid of interest to the reader are reported almost daily in the journals, simply for the purpose of letting the profession know that Doctor A. or Doctor B. has performed the operation—it is needless to say many of these are performed unnecessarily. Doleris declares that in Paris alone at least 4,000 women have been deprived of ovaries or uteri without sufficient cause; also that:

This is an age in which unscrupulous and unreasoning operative boldness, more or less helped out by antisepsis, too often takes the place of true surgical knowledge. Hysterectomy and laparotomy are undertaken for the sole purpose of increasing the physician's list of operations performed; only the immediate result is taken into account, while those who stop to ask whether less radical measures would afford the desired relief are few in number. In the report of hysterectomies, the whole truth is unfortunately not always told. One operator has claimed that the patient *obliged* him to operate. After palpation and prolonged internal examination, the diagnosis was still utterly beclouded. He performed hysterectomy and removed uterus, tubes, and ovaries, *all in a perfect condition of health.* Could the patient have forced him to throw her out of the window? Can it be that operations are performed principally that young surgeons may acquire experience and dexterity, and that, if legitimate subjects of operation are wanting the accommodating operator will perforce content himself with what he can get? Neophytes in gynæcology seem to have but one idea — laparotomy, sensational operation, a round dozen of castrations to start off with. Cases suddenly assume a dangerous aspect, or if nothing dangerous can be made of them, at least they necessitate an *exploratory incision;* but the abdominal wound is rarely closed without the extraction of—something. This is not gynæcology, it is merely surgical license. Let the extremists beware! They are playing with edged tools. In the course of time, people will no longer be taken in by their affectation of simplicity, their occasional acknowledgment of error—"*very deplorable, no doubt*"—and their absolute mania for operating. But the real gynæcologists, who desire the good of their patients and who wish to be worthy of their profession, cannot hold their peace when they witness the excesses committed in the name of abdominal surgery.

Much harm has been done by the "*exploratory incision*" *doctrine*, promulgated by successful surgeons who have declared they would as soon perform a laparotomy as open a boil. With such examples as these, the tyro thinks it his duty to open the abdomen with impunity, even though he would not dare attempt removal of enlarged cervical or axillary glands. This criticism may seem severe, but in a large city one has the opportunity of learning of such mistakes as laparotomy for *extra-uterine pregnancy*, revealing only a normal pregnant uterus; for *pyosalpinx*, where normal adnexa are found; for *ovarian cyst*, said cyst when exposed revealing only an ordinary ascites!

Nevertheless no one denies that the exploratory incision has been productive of much good, but its use should be limited to the well equipped and thoroughly competent —to the surgeon who is able to differentiate between healthy and diseased organs and tissues, able to decide in a moment which is the best course to pursue in any particular case, and competent to do anything known to abdominal or pelvic surgery and do it according to the best principles and most approved methods. Intestinal complications are most common; and unless the operator is ready and able to properly deal with a torn intestine or bladder, he is assuming risks which no conscientious man would even think of.

Unfinished operations are often classed as exploratory, and only serve to hasten the untimely end of the patient; it should therefore be the aim to always carry out any operative procedure to completion. Gynæcology, unfortunately, has suffered from many fads—among the most prominent being di-

vulsion of the cervix uteri, the abuse of Emmett's operation, and curettement of the uterus: One or more of these procedures is often employed when the gynæcologist has no diagnosis and feels that *something* has to be done. Neurasthenia, expressing itself locally in one or more of the pelvic organs, is accountable for the desperate state in which we find many gynæcological patients, and it is this class that fall an easy prey to the unscrupulous or the ignorant and enthusiastic cœliotomists. Who cannot recall cases of pain in the back due to coccygodynia, myalgia, or chronic malarial poisoning, which have been referred to the uterus; painful micturition (often due to caruncle of the meatus urinarius, or to fissure of the urethra) attributed to uterine displacement; cases of habitual constipation with pain in the abdomen, mistaken for evidence of ovarian disease? Is it not quite true that pressure on the left ovary, due to chronic constipation, is a very frequent cause of ovarian pain? But is such to be cured by the knife? It is self-evident to the careful and observing practitioner that anæmia and hysteria play an important rôle in the production of pain. By far the largest class of diseases with which the pelvic surgeon has to deal are inflammations of the uterine appendages, and these can best be treated in the early stages by rest, the administration of saline purgatives, and by application of moist heat. It is only when resolution cannot be secured by these means that operative interference is demanded.

Again, delay is not conservatism! But delay is too often practiced in one of the most dangerous forms of intra-pelvic disease, viz., myoma of the uterus. Uterine myomata undergo degeneration and suppuration, and are not infrequently associated with diseased tubes and ovaries; they are the cause of frequent hæmorrhage by which patients are so reduced as not to be able to withstand the shock of an operation. This operation, if done early, before such complications as adhesions to adjacent organs arise, is comparatively safe. Castration not only does not prevent the further growth of uterine myomata, but very often the general health of patients treated in this manner is made worse by the too early artificial production of the menopause. Mr. Tait says the whole of his experience in every department of abdominal surgery is one continuous outcry against delay.

Another question over which fierce war is being waged is that of drainage. Price, of Philadelphia, whose results in this department of surgery are undoubtedly the best in this country, is the great exponent of drainage. Kelly, of Baltimore, another leading gynæcologist, takes the opposite stand and rarely drains. Too many men are doing laparotomy work, and especially those who know too little about the diagnosis and pathology of abdominal or pelvic diseases, or who are ignorant of the best technique and have not the facilities for such work at hand. Successful work can only be done by those who have been especially trained and devote themselves to this department of surgery. I fully agree with Jenks, of Detroit, when he says:

Many patients, and particularly those who consult gynæcologists, instead of requiring the knife of the surgeon or the preparations of the pharmacist, are in need of the kindest advice and sympathy. Their minds are emotional, their ideas are disordered, and their sensations abnormal. A study of psychical, no less than physical, disorders is an essential part in the education of one who aspires to any degree of proficiency in differential diagnosis. We have to deal with the mysteries of life, which are intensified when the manifestations are abnormal.

It cannot be questioned that in gynæcology there has been much needless and reckless surgery. It is a surgical sin to make an operation attended with the least danger or causing mutilation, if safer methods will accomplish all that is needed. But equally to be deprecated are the temporizing methods of some of those who call themselves conservatives: with such, conservatism is a misnomer. Procrastination and hesitancy, or lack of knowledge and courage, are not synonymous with true conservatism. These are the methods, not infrequently, of the timid or the ignorant, and no more represent the genuine gynæcologist than do those of the reckless surgeon.

There are abuses and errors to be corrected besides those of a strictly surgical character, not the least of which is the too common

and often unnecessary pelvic examination of young and unmarried women. Conservatism has not always met with the consideration it deserves. In our art, conservatism in its true sense signifies the preservation of health and saving of life by the least dangerous means, but, if necessity demands, the most effectual and radical treatment should not be avoided. It is not conservatism to attempt to disperse a pelvic abscess by tampons and hot douches, or to cure an ovarian tumor by electricity. True conservatism demands the best and promptest means of treatment.

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TREATMENT OF INEVITABLE ABORTIONS.

BY KENNETH GUNSOLUS, M.D.

Great diversity of opinion exists as to the treatment of unavoidable abortions, and therefore the diversified rules found in text-books are very misleading and puzzling, especially to the young practitioner.

The fœtus and placenta are so intimately bound together during the first two months of gestation, that an abortion during this period means, in the great majority of cases, expulsion of both simultaneously; but after the second month the expulsion of the fœtus is easy, while that of the placenta is a much more difficult matter; again, it is at this period, or later, that we most frequently encounter cases of abortion, particularly of the incomplete variety, when a portion (or all) of the afterbirth is retained.

Called to see a case of this kind when the uterus contains dead tissue, the product of conception, no longer nourished by the maternal blood, what should be the practice, and what plans laid down? The statement of the patient may be taken, in the majority of instances, for naught, since with her a blood-clot very often figures as a fragment or even the whole of the placenta, and only actual examination of the cavity of the uterus can be relied upon for information. It is perhaps needless to say the rules of thorough antisepsis should always be observed; yet very many practitioners who conduct a labor at full term with antiseptic precautions that are seemingly ridiculous in detail, give little heed thereto in abortions, though it goes without saying that the latter are just as important as the former; clothes, hands, instruments, tampons, etc., and even the patient herself, should be aseptic, before even an attempt is made to determine whether any product of conception remains.

When called at an early date, there is but one danger, viz., hæmorrhage; should this be considerable and the cervix dilated, the tampon is the great remedy if properly applied by means of bivalve speculum and uterine dressing forceps; I use absorbent cotton, immersing in a strong carbolic-acid solution, squeezing as dry as possible in a towel, and then packing the vagina full—first Douglas' *cul-de-sac*, then on the other side, and lastly in front of the os, continuing to the vulva. The operator may be assured after this procedure that hæmorrhage will cease. The process of dilatation and expulsion very often goes on to successful termination without danger, and the medical attendant is free to leave for six or seven hours, often to find on his return that the patient is very comfortable and that there has been no hæmorrhage; upon removal of the tampon, very likely there will be found atop of it either the unbroken fœtal shell (if it is early in the stage of uterine gestation), or (if later) the fœtus with membranes and placenta. Should the cervix, however, be still contracted, and hæmorrhage continue, leave the case for another six or eight hours; in the meantime, should pains be severe, I resort to twenty grains or more of chloral hydrate, but never to opium, as I think the latter interferes with the work of expulsion; neither would I in any case give ergot, as the tendency of this drug is to act on the sphincters of the uterus and therefore contract the cervix and thwart all efforts at expulsion of the uterine contents.

Let us suppose, however, that the cervix is dilated, or dilatable, hæmorrhage and pain stopped, and the patient comfortable; or possibly that with placental forceps a portion of the placental mass that was presenting has been torn away, the uterus contracted, retaining a portion; or perhaps that the fœtus has been expelled, and the placenta retained in its entirety. In such a case, shall one remain active or passive; shall he wait two or three days or longer for the uterus to finish

its work? I answer this interrogatory emphatically in favor of active measures!—advocate immediate removal of the dangerous uterine contents, since there is no better nidus for streptococci, for putrid intoxication, or for puerperal septicæmia; and if the patient does recover with passive measures, it will be in spite of criminal negligence. One does not for a moment think of leaving a retained placenta at full term, and there is no reason for acting differently in a case of abortion.

Having found a portion or all of the afterbirth remaining, it is essential to remove it promptly. Place the patient upon a table in Sims's position, administer an anæsthetic when necessary, then explore the uterus thoroughly, and if necessary employ the curette to remove the adherent secundines, etc.; with the finger as a curette one can do less harm, and at the same time recognize the situation with greater efficiency—I consider the finger as a curette particularly applicable when there is a considerable amount of dead tissue in the uterus. After exploring and securing all that is possible with the finger, there is no objection to using a dull curette like that of Thomas.—The sharp curette was of course first used by Recamier, and was the only one in use for some time; but there is no doubt it has been productive of a deal of harm at times, since the interior walls of the uterus have occasionally been punctured, or denuded surfaces left exposed to remaining pieces of tissue undergoing decomposition—and with such, surface absorption goes on readily, endangering the life of the patient through septicæmia. Certainly with the inexperienced the finger is the safer, but in the hands of an expert the dull curette is also both safe and efficient; Doctor Mundé and others report cases where the fingers succeeded after the dull curette had failed. By using pressure above the symphysis with the disengaged hand, and employing an anæsthetic, the uterus can almost always be depressed so that the fundus can be reached.

As to placental forceps, I have found that when the afterbirth was adherent they often failed to remove any but the more loose portions, when it became necessary to follow them with the curette; and in choosing a curette choose a large one, which is less dangerous than the small instrument and quite as efficient. The staff of the instrument should be of malleable or pliable metal, so that all portions of the uterine cavity can be reached. When a dilator is necessary, one of the parallel-bar pattern is perhaps preferable.

After the uterus is curetted of its contents, wash out both the uterine cavity and vagina with bichloride solution, employing always the double intra-uterine injection tube for the former. Whatever means are employed to remove the products of conception, there are very often some detached shreds or blood-clots left, or clots formed as the sequel of the operation of curetting, and irrigation is a very efficient means of removing these, and regularly used for some time it will, I think, very often replace the curette, and certainly is much safer, although it may be a more tedious method in getting rid of the sources of infection.

Again, where sepsis has already taken place, as evinced by constitutional symptoms, such as sudden chill or rigor followed by a high temperature, the effect of disinfectant injections by the double intra-uterine tube is almost magical, reducing a temperature three or four degrees in as many hours; it is next to useless, however, to wash out the vagina alone, while foci of infection in the cavity of the uterus are left untouched. How many practitioners, from negligence, from carelessness, or from a natural fear of meddling with the inside of the womb, leave the patient too often to the fate of septic absorption, in disregard of the authoritative teaching and practice of the best authorities!

Detroit, Mich.

THE MEXICAN STRETCHER.*

BY DOCTOR R. ORTEGA.†

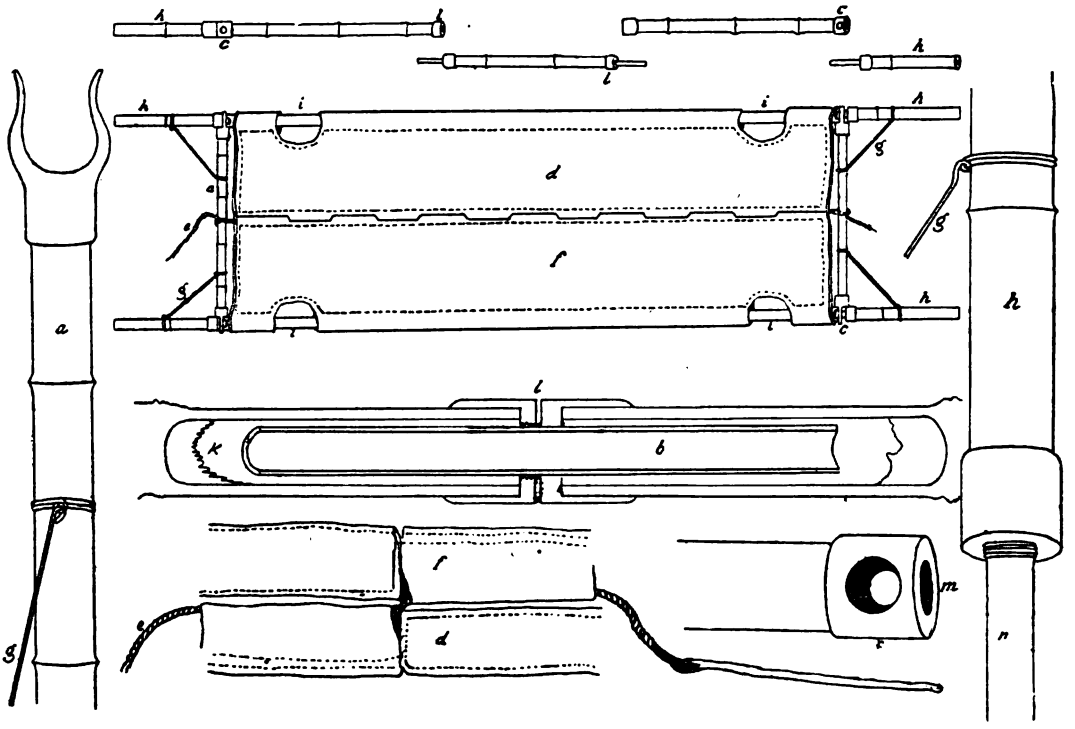
I should commence by praying for indulgence on account of my imperfect English. I am satisfied that you will pardon my shortcomings in this direction, knowing, as you do, that medicine is a jealous lover and does not permit her followers to devote much of their time to other subjects.

I trust also that you will not attempt to judge by me, of the medical faculty of my

*Read before the Association of Railway Surgeons at Galveston, Texas, May, 1894.

†Facultad de Mexico.

country. I claim simply to be one of its working members, and only unexpected circumstances have afforded me the honor of appearing before your illustrious body.



MEXICAN STRETCHER.

Doctors: You, having had more experience than I, cannot have failed to note the intense pain inflicted on patients in general, and especially those suffering from fractures, whenever it is necessary to raise them. You have frequently seen, in raising a patient, a fractured bone penetrate the skin and cut a blood-vessel (and perhaps cause a fatal hæmorrhage) when the vessel was intact immediately after the fracture occurred. You have also doubtless seen syncope induced by pain on such occasions. The risk of these and other complications, dangerous if not fatal to the patient, and always unpleasant for the attending surgeon, is reduced to the same extent as we avoid the raising of the patient.

It is true that we have learned in college how to raise a patient in the manner best suited to prevent these troubles. But can a surgeon, unattended, thus handle a patient? —Certainly not! We are forced, in most cases, to avail ourselves of the assistance of those who are inexperienced or ignorant of the profession Even if they were not so, can they by ordinary means avoid distressing the patient?

It is only in exceptional cases that we can dress the injuries of a patient at the place of the accident. In most cases he must be removed to the ambulance, to the train, to his residence, to the hospital, to the operating-table, and, finally, to bed. This entails raising him many times, and, if it is done by the regular methods, he is liable to suffer as I have indicated.

All this occupied my mind until one day I conceived the idea of the "Mexican Stretcher," by using which it is necessary to only raise the patient *once*, in removing him from the place where he has been injured. I will not trouble you with a description of the stretcher.

Knocked down and out of use it is small and light, weight seven pounds, and it can be raised easily in the corner of the caboose, of the sleeping-car, or the ambulance. The central portion is made of canvas protected with oil-cloth, and thus it can be easily kept clean and rendered aseptic.

The material used in its construction is not of the proper kind, but it is the only one I was able to secure.

Finally, it now only remains to show the operation of the stretcher, and to thank you for your attention.

Ciudad Porfirio Diaz,
Coahuilla, Mexico.

Society Meetings.

THE WINDSOR PHYSICIANS AND SURGEONS' ASSOCIATION.

A regular meeting was held Tuesday evening, May 1st, at the residence of the President, Doctor Samson, who occupied the chair.

The Secretary presented his report from January 1st, 1893, to May 1st, 1894, which was accepted and a vote of thanks tendered for services rendered.

Doctor Prouse was then admitted a member of the Association.

Doctor Brooke presented a paper on "The Treatment of Scarlet Fever."

In discussing this topic Doctor Bell remarked he had used oil of eucalyptus as a prophylaxis in scarlet fever with no very good results. Usually segregated his patients, and burned a mixture of carbolic acid, oil of eucalyptus and turpentine in the room. Pays attention to the skin, assists the kidneys, and gives milk diet; would use peroxide of hydrogen where the throat affection is very severe. In nephritis has found dry cupping very useful. In otitis where there is much bulging of the drum of the ear, the tympanum should be punctured.

Doctor Cruikshank: Would follow the lines laid down in Doctor Brooke's paper; has not had much experience in very severe cases. In otitis would use a solution of biborate of soda to syringe the ear out with; would puncture if there was much distension of the drum. If there were ulcerations of the mucous membrane, would apply nitrate of silver.

Doctor Prouse: Has not treated any severe scarlet fever of late; ten years ago he met with a number of cases of a very severe type, many of which resulted fatally. The throat and ear troubles should be attended to at the start: in otitis would touch ulcerations with nitrate of silver; also use injections of sodium biborate.

Doctor Ashbaugh: Has not treated many cases, but would not use inunctions of carbolated vaselin on account of the varying strength of different preparations.

Doctor Hamilton: Shields from exposure to cold as far as possible; to reduce temperature, employs bromide of potassium and spirit of nitrous ether, also tincture aconite; ipecac to guard the lungs from any irritation and keep them clear; does not approve the use of cold water, but prefers hot, as it relaxes the pores and promotes free perspiration; approves application to the throat of a cloth wrung out of cold water. Has used acetanilid to reduce temperature, with excellent results, but employs in small doses—not enough to produce too much depression. For the pharyngitis, employs potassium chlorate and dilute hydrochloric acid; sometimes applies nitrate of silver; has also used zinc sulphate with good results; sometimes employs cocaine as a local application; considers pure glycerin especially applicable in throat trouble. Never used inunctions except during desquamative stage. Keeps patients in a well ventilated room. For nephritis gives muriate tincture of iron, and has had good results from its use. In ear trouble, treatment would depend upon circumstances. Would keep patient indoors at least one month after fever.

Doctor Carney was not present when paper was read. His experience has been slight lately in proportion to cases in earlier days. Varies treatment from what he was taught. Liquor ammonia acetatis, spirit of nitrous ether, and muriate tincture of iron, form his sheet anchor. To reduce temperature, relies upon sponging for the first two or three days, then takes to inunction with olive oil, perhaps with carbolic acid. In throat troubles meets indications as they arise; looks upon it as he would upon diphtheria. Would not detach any throat membrane that might be present. Would use emollients and antiseptics.

Doctor Samson: Does not approve inunctions; believes in keeping the patient perfectly quiet. A physician should always protect himself when attending a case of scarlet fever. There are cases where it is useless to do anything. Approves cold applications and would use ice-water if temperature rose to 106° F., but would not employ it if temperature did not rise above 102°.

Doctor Cruikshank presented a very interesting paper on "Round Worms."

Doctor Bell expressed himself as being pleased with the paper; thought there were symptoms of such worms. Thinks santonin is often productive of much harm; it is a drug which has been much abused. Considers it a good "emmenagogue," especially in suppressed menstruation.

Doctor Hamilton cited a case where a child vomited worms in his presence. His favorite prescription is a powder composed of santonin and mercurial chalk.

Moved and seconded that the Association change the night of meeting from the first Tuesday in each month to the second Tuesday. Carried.

Doctor Ashbaugh was appointed to prepare a paper for the next meeting.

Adjournment was had, to meet at Doctor Coventry's residence the second Tuesday in June.

D. E. BROOKE,
Secretary.

Windsor, Ontario.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., JUNE 11, 1894.

Editorial.

VILIFICATION NO ARGUMENT.

An obscure journal in Virginia recently took occasion to animadvert upon the editor of the *American Lancet* because the latter is unwilling to uphold secret nostrum advertising and other forms of quackery. According to said journal Doctor Connor is guilty of "willful misstatements," an accusation that falls entirely flat to anyone at all familiar with the gentleman, who, as is well known, through a long and arduous medical career has sustained a reputation, personal and professional, absolutely *sans reproche.*

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The said journal informs its readers "that the *American Lancet* is owned by George S. Davis, of Parke, Davis & Co., Detroit, Mich., a firm that "makes great pretensions to an ethical course," to which information "many of our readers have been treated *ad nauseam.*" Further is added: "We understand that the editor is employed by the publisher, and thus indirectly is influenced by this drug house, or one of its members at least."

It seems hardly necessary to stigmatize the foregoing as an impudent falsehood, or to say that the publisher in neither his capacity as an individual or as a member of a pharmaceutical house exercises any control or influence, directly or indirectly, over the editorial columns of the *American Lancet* or *Medical Age*, and that therefore these two periodicals are "not in it" *for revenue only.* An examination of the *Southern Clinic*, the journal aforesaid, reveals the fact that neither Mr. George S. Davis or Messrs. Parke, Davis & Co. advertise with C. A. Bryce, who poses as both editor and owner, hence there is no difficulty in surmising the *raison d'être* of the whole tirade.

Doctor Bryce seems to have very original ideas of editorial prerogatives, and of what constitutes medical literature. Does he know anything of the following, which appears in the *Atlanta Medical and Surgical Journal* for May?

The following form of letter has been distributed, we know not how widely, in Georgia, Alabama, and perhaps other Southern States:

RICHMOND, VA., April 18th, 1894.

Dear Doctor:—Please spare a moment to enclosed circular. You see this is the representative Southern medical journal, adopted even by the profession of N. C., E. Tenn., etc. Your State has no journal, although this journal has many subscribers there. Won't you help to further develop it? If you promptly remit a dollar and a half, or if you subscribe now to pay two dollars by next fall, I will send journal one year, beginning this month. Isn't that liberal enough?

Yours very truly,

The first copy which we saw was sent us by one of our subscribers in Southern Georgia, along with a very emphatic protest against the statement that Georgia has no medical journal. The ethics of medical journalism were naturally somewhat strained by such enterprising correspondence, so we forwarded the letter to our amiable Virginia contemporary, along with appropriate comments of our own.

It is a matter of surprise that Doctor Connor ever considered any utterance of the *Clinic* worthy of notice, considering the standard of medical morality set forth in its columns.

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Finally, we do not know why we also are thus led to notice the aforesaid journal at all, thereby giving it a *quasi*-status of respectability it has hitherto vainly attempted to secure.

CREATURES OF AN HOUR.

Addressing the Section for Internal Medicine of the Eleventh International Medical Congress, Doctor Calvanico frankly avowed the insufficiency of all the remedies heretofore proposed for the cure of pulmonary tuberculosis. Not one has made good its promise! There is no "method" which will eradicate the disease, and its best management consists in the rigorous enforcement of an enlightened regimen along with general hygiene. The latter will alone prove to be something more than a rotten support when

leaned upon by the despairing consumptive. Doctor Calvanico's wail of skepticism is relieved only by the concession that idiotherapy may indeed yield good results, if resorted to in the early stages of the disease, and that the most serviceable medicament is Creosote mixed with Cod-Liver Oil. Scant comfort this, to one who surveys the long list of alleged curatives, from blue glass to Koch's tuberculin.

Sad but not singular is this succession of disappointments and delusions. A malady from which no race or clime is exempt, which inflicts death in its most lingering, heart-rending form, which knows no distinction of youth or age, and which summons from life fully one-twelfth of all the victims of disease, cannot fail to rouse the sympathies and spur the investigations of all benevolent or fame-loving scientists. Ardently desiring the remedy which shall banish this fund of pain and woe, the wish is too often father to the thought: enthusiasm silences the sober objections of truth; and agents, declared to relieve the great incurable, are hastily recommended without the careful maturing and faithful, repeated control which should form the test of every remedy ere it is permitted to add length to the interminable list of therapeutic fallacies.

Who can estimate the mischief wrought by these vaunted panaceas—the hopes roused only to be blasted, the undue confidence followed by dejection and despair, the waste of energy and precious time in paltering with delusive remedies until rational means of hygiene and diet are no longer available because so tardily sought? What wonder that indignation is often felt at these cure-mongers and sensation-makers, with their quickly hatched remedies—and that at least one great reputation has suffered irretrievably from violation of the scientist's first duty—patience, accuracy, laborious experiment? When one recalls the haste, the immaturity, the superficial investigation, which marked the Koch episode, he cannot forbear expressing the conviction that pathology is sadly in need of some of that divine Darwinian painstaking quality which shall prompt the scientist to weigh and measure and weigh again, withholding his results for half a lifetime, if need be.

Truth must be toiled for. Valuable discoveries have their price in labor. Consumption may some day be exterminated, but let us rest assured that humanity's deliverance from this scourge will never be effected save by investigation worthy of the name, by cautious, sober, protracted experiment and observation. Those medical men not willing to pay this price can render mankind no better service than to suppress their shallow, immature conclusions and at least permit the consumptive either to die in peace, or take his chances in the employment of measures which centuries have found helpful if not curative.

We may depend upon it that tuberculosis, like cholera, yellow fever, and smallpox, will owe much of its eventual extermination to preventive measures—to rational hygiene in the individual and to a merciless warfare against contagion-breeding agencies. The sputum of the consumptive must not be expectorated in places where it will dry untouched and prove a focus of evil to the entire environment. The same bed and the same apartment must no longer be occupied by the sound and the sick. Our railway coaches must not be impregnated with disease germs. And in every conceivable way we must seek to guard the healthy from this dreadful inoculation.

If the past history of tuberculosis contains so many chapters of blighted hope and of mischief wrought by hasty, superficial experiment and false deduction, what shall we say, what words of stinging reprobation and withering scorn shall we find for the quacks and the charlatans who would traffic in that multitude of sorrows which form the train of consumption—who, well knowing that their remedies are futile, aye noxious, yet deliberately seek by lying advertisements or smooth-tongued promise to lure the unfortunate into their toils? Who shall teach us the proper language of malediction for such infamous dishonesty—such monstrous selfishness? In one quarter we behold some miserable piece of apparatus—here it is a vapor, there an inunction, elsewhere an elixir, warranted to restore the consumptive to exuberant health. For the punishment of those who would thus make capital out of human suffering, and fatten on the miseries of this dread malady,

what expiation can suffice—what perdition is deep enough?

THE ANTI-VACCINATION MOVEMENT.

We are in receipt of a somewhat shady periodical entitled *The Health Monthly*, on the second page of which appears a paper, duly marked, on "Vaccination by Lancet and Club," illustrated with a cut stolen outright from the English work "Fashions of the Day in Medicine and Science," without a particle of credit. It indulges in such blood-curdling remarks as "the rape of the blood;" "invasion of personal rights which would arouse civil war in England;" "hirelings of health boards;" "breaking through man's skin and poisoning his life-blood with filthy, beastly, nasty, diseased pus," etc., etc.

It is the same old—to use a vulgar, but highly appropriate term—ROT. There is hardly a word of truth in the whole paper, but, on the contrary, it is composed chiefly of most bold-faced falsehoods.

Coming under the high-sounding title of *The Health Monthly*, which is entered at the New York postoffice as second-class matter, it might be that ignorant people would imagine the publication of some value, but on turning to the eighth page, opposite the editorial, we find the *raison d'être* of the whole journal, where we are informed skillful medical advice will be furnished by Doctor E. V. F—— at the "cost of only a postage stamp." Furthermore, we find the proprietor and editor is likewise proprietor of no less than six patent or secret nostrums defined by the adjective "magnetic," to say nothing of the thirteen other preparations or devices, the entire "outfit" representing sufficient to cure all the ills flesh is heir to. In the same advertisement we find "a painless self-cure for phimosis;" "soluble sanitary tampons for self-cure home treatment of diseases of women"—whatever that may mean; the "magnetic croup tippet, warranted to prevent croup," and Doctor F——'s "eye sharpener, which cures presbyopia, etc., etc., making it possible to do away with spectacles."

Wonder how some of our anti-vaccination friends feel to find themselves in such company; and it speaks volumes for the anti-vaccination movement when it is obliged to seek champions from the very slums of quackery.

THAT ASEPTIC SUIT.

A few years since all the medical publications in the country were pestered to give place in their columns to a free "ad." in the shape of a communication (and a cut, duly supplied by the author) of a suit that was to be perfectly germ-proof and to revolutionize the entire practice of medicine. Nothing was said, however, of the non-utility of the contrivance, or its liability to frighten horses, nurse-maids, and children. It was in fact a huge joke to the profession, since the whole design was ugly enough to jump a street car from the track.

Our English contemporary, *The Hospital*, has just heard of the device, apparently, and takes it both soberly and earnestly. It first derived its information through the reports of the Patent Office at Washington, and, speaking of it as a "disease-proof suit of clothes," describes it as follows:

It is a complete suit of rubber armor, in fact the dress of an ordinary diver. This is constructed on air-tight principles, and therefore no disease germs can enter. A small pair of bellows are to be found beneath each foot, which on being compressed by the action of walking, or tipping backwards and forwards upon the toes, blows fresh air in an ingenious manner through the armor. This air enters and is filtered through a germ-proof diaphragm under each of the feet, passing upward and out through a diaphragm which is placed at the top of the head. The operator has protection afforded to his visual organs through two glass eye-pieces.

RIGID OS.

A new journal started in central New York gives some very effective advice in dealing with obstetrics. It declares that "when the pains are severe, and the parts rigid and unyielding, twenty drops of Jaborandi every half-hour for two or three doses, or until the perspiration is quite free, will have a most happy and soothing effect—the patient will become quiet and the os rapidly dilate."

This is a good deal like going from New York to New Orleans in order to reach St.

Louis. What occasion, we ask, is there for a remedy possessing such a depressing effect upon the system, and at a time when every particle of energy is demanded to be conserved? And why employ Jaborandi when either chloral hydrate administered by the mouth, or belladonna ointment applied to the cervix, answers the purpose in a much better way?

TAXING PHYSICIANS.

The city of Louisville, Ky., taxes each physician ten dollars. Charlotte, N. C., also taxes medical men to the tune of fifteen dollars a year. Thus the former city secures an annual income of thirty-four hundred dollars, and the latter four hundred and five dollars, and yet it is expected and demanded of medical men in both of these cities to give a large share of their time and skill to public institutions and charity. Why are not lawyers and clergymen taxed as well? It would seem fully as appropriate.

EDITORIAL NOTES.

The Lay Press and the Medical Profession.—

The *Cleveland Leader* in most candid fashion thus punctures the bubble of newspaper opposition to medical-practice acts:

The truth is, we are ashamed to confess, that the reason why it is easy to purge and guard the bar, and impossible, apparently, to protect the medical profession from defilement, must be sought in the large advertising patronage given to newspapers by quacks. For selfish and unworthy considerations the more cowardly and avaricious portion of the press is always willing to help the cormorants who masquerade under the guise of physicians, defeat bills to drive them out of business or out of Ohio. If there were no money for base newspapers in the toleration of the ignorant and unscrupulous persons who prey upon the public as doctors, they would very soon be expelled.

Value of Pure Water.—

In a large factory in Schenectady, N. Y., employing two thousand hands, much inconvenience was felt, independent of the season, from prevalence of diarrhœal diseases, sometimes to the extent of ten per cent. of the employés. The company substituted distilled for river water, allowing no other in the works. The improvement in the health of the hands was so marked that arrangements are being made to supply the families of the operators with distilled water as well. Another firm is about to adopt the same practice.—*Report of the Board of Health of New York.*

Variolinum.—

This is one of the remedies of our Homœopathic brethren, the character of which is amply explained by its title and the *similia* motto. Doctor Geo. W. Winterburn, in the *Homœopathic Journal of Obstetrics*, says:

The value of *Variolinum* in the treatment of smallpox, it seems to me, cannot be overestimated. . . . I give *Variolinum* internally, and the persons do not take smallpox, therefore it may be said with equal truth that *Variolinum* prevented smallpox.

It would appear as if the carrying of the remedy alone, if at all potent, would be an excellent way to disseminate variola.

Opium-Smoking for Retention of Urine.—

Doctor Louis Lewis some years ago recorded, in the *Medical World*, the employment of Opium-smoking for retention of urine, with signal success. Recently he has had occasion to return to this treatment in the case of an old man suffering retention of forty hours' duration due to prolonged debauch. He was unable to use a catheter. The man had a tight stricture, an enlarged prostate, and was in imminent risk of rupturing the urethra. The Opium pipe apparently saved him from a critical operation.

Faithful to His Trust.—

Doctor F. S. Keith, a homœopathic practitioner of Waltham, Massachusetts, has declined the appointment of public vaccinator on the ground that he can find no authority for the practice in Hahnemann's Organon. We wonder if the fact the position has attached to it but a very small salary, and is moreover dependent upon the caprice of aldermen, had any influence in the declination.

Interior Illumination of the Human Economy.—

It is reported that at Baltimore recently

Doctor Friedenwald passed a small incandescent electric light into the stomach of a patient in a darkened room, and was able to secure sufficient translucency of the body to demonstrate a portion of the physiological functions and operations taking place.

The American Medical Association.—

With the close of the session at San Francisco the following officers were elected for the ensuing year: President, Doctor Donald Maclean, of Michigan; Vice-President, T. C. Loveling, of Ohio; Treasurer, Doctor Newman, of Illinois; Secretary, William B. Atkinson, of Pennsylvania; Assistant Secretary, H. B. Ellis, of California; Librarian, G. E. Webster, of Illinois; Editor of the Association *Journal*, J. B. Hamilton, of Illinois.

Carcinoma.—

Doctor J. J. Lawrence propounds the following pertinent queries:

"Is cancer local or constitutional in origin? Why does it manifest such an unwavering preference for parts whose blood supply fluctuates, and whose functional activity is great? Is it infectious?"

The President of the American Medical Association.—

Doctor Donald Maclean has been selected to fill the highest office within the gift of the American Medical Association. This is an honor worthily bestowed, and the Doctor, the Association, and Detroit are alike to be congratulated.

The Death Test.—

Chas. Bouchard declares a certain, simple, and easily applied means of recognizing the presence of death is to ascertain the temperature in the axilla; if this falls below 68° F. it is an indubitable sign life is extinct.

Professional Jealousy.—

"The jealousy of physicians is remarkable. No sooner does one of them discover a disease than half a dozen more concentrate all their energies upon its suppression."—*Puck.*

The American Medical College Association.—

The officers for 1894–5 are: E. Fletcher Ingalls, Chicago, President; Perry S. Millard, St. Paul, Secretary and Treasurer.

Items and News.

The Nostrum-Vendor.—

This dare-devil worries me; every mail brings some of his diabolical literature or some of his infernal stuff, "all free gratis and for nothing." I will treat any doctor in the United States to a hat who will show me how to stop this fellow from writing me. One day he tells me about tablets, the next about pills, the next about elixirs, and then come the "ines," "L——ine," "H——ine," "P——ine," "H——ine," "T——ine," "Y——ine," "M——ine," last but not least "B——ine," all of which are certainly *asinine*. If this monster can be killed off, I would be glad to know it.

Kentucky has made a raid on him and I hope will rout him. Other States ought to follow suit. Recollect, I am not making war on the "ines;" they are inoffensive *per se*. What I object to is the knave who puts on the almanac attachments. "A—a" with its almanac attachment is no better (to me) than "Jayne's Expectorant." If a remedy will not sell without this attachment, I'll never buy it. If quinine, morphine, opium, chloral, chloroform, and calomel should be accompanied with an almanac attachment, together with all the lies that go with such, then they too would be stricken from my list of remedies. A remedy that will not sell on its own merits is like a doctor who depends upon a newspaper for his reputation. Neither one will do to trust (in my estimation). The genuine medicine needs no almanac attachment. The first-class doctor never advertises. The nostrum-vendor is a big thing *as a nuisance*, and ought to be abated. The advertising doctor belongs to the same category, and if you will watch right close you will see these two fellows very close together. The newspaper doctor prescribes nostrums. "J——e," "O——n," "S——c," are favorites with him.—DOCTOR W. P. HOWLE, in *Journal of the American Medical Association.*

Just Condemnation.—

The Columbia Chemical Company has amply warranted the suspicions of medical men by at last dropping the mask of legitimacy and appealing directly to the general public for the sale of its wares. Current issues of the daily papers contain advertisements of "Testine (Hammond)," with the fairy tale of its wonderful powers, and the statement of its price and dose. This is entering a field previously occupied by "The Mormon Elder's Damiana Wafers," "Wilcox's Chichester Pills," and other nostrums

of that peculiarly nauseous class, which is doubtless profitable enough to such persons as do not value their self-respect too highly. This move of the Columbia Chemical Company fully justifies all the severe things ever said of it by its enemies, and even invites further condemnation. It is said that corporations have no souls. Whether this applies to the officers of corporations, we do not know. A psychical examination of J. C. Hayden, president, M. Lanza, secretary, and W. P. Springer, general manager, might determine this point.—*Pittsburgh Medical Review.*

Foreignism.—

America should be thoroughly cosmopolitan; her people come from the ends of the earth; but just now American supremacy is threatened by an element of foreignism which is slowly permeating our institutions. In politics we see it in Coxeyism, in the cry for a paternal government; and in medicine we have the degradation of pathology and therapeutics in the so-called science of bacteriology.

To encourage this tendency toward foreignism is subversive of the best interests of America and American people. Let us make a stand in medicine at least. It will be time enough for American physicians to adopt the teachings of other nations when statistics demonstrate that we are hopelessly behind in the march of progress.—*Medical Brief.*

Structure of Root-Hairs.—

T. Jamieson writes *Science* that careful examination of root-hairs reveals the presence of a well defined aperture with lips in the case of every plant of a large number examined during three years. Very careful manipulation and focusing of the light are necessary to detect this, in addition to persistent observation, and the hairs must also be in a favorable position. The aperture is usually at the point, but is sometimes a little below, the point then forming a kind of cap. The apertures vary considerably in shape and position, being usually circular and tapering inwards. Sometimes, however, the opening is transverse, the tip of the root seeming half curved, the aperture then appearing slightly at one side, and the tip like a lip or knob.

Every Man to His Trade.—

I know a woman who has five doctors whom she consults at regular intervals. Number one, who is of most importance, looks after her general system, and is consulted when the trouble cannot be definitely located. Number two is the eye, ear, and throat specialist. Number three takes care of her skin and complexion. Number four has tackled her hæmorrhoids, but has not cured them; he is the "rectologist." Number five, ah, number five! he is in the swim just now; he palpates the appendix, the ovaries and their accessories, and is ready for a laparotomy should a pain strike his territory. I know she has also been in the hands of the dentist and chiropodist.—*Louisville Medical Monthly.*

Curious Fauna of La Plata.—

A curious medley of animal life is described by Mr. W. H. Hudson as existing in the pampas region of La Plata. A poisonous toad which kills horses; the wrestler frog, which suddenly pinches its enemy with its fore legs and then runs away; a large, ven omous, man-chasing spider, which pursues men on foot and on horseback; dragon-flies, a single individual of which will cause clouds of gnats, mosquitoes and sand-flies to disappear in an instant; and an opossum, fully adapted to life in a desert destitute of trees, and which, when brought to a tree, which it may never have seen before, will clasp it and climb it with all the agility of its forest-dwelling relatives of North America.

Credit to Whom Credit is Due.—

At the nineteenth annual meeting of the United States Hay Fever Association, Doctor S. S. Bishop, of Chicago, obtained the prize for the best essay on the subject of hay fever, proposing the theory of uric-acid origin, with salicylate of soda for treatment. One year previous to the reading of the essay, Doctor Shawe Tyrrel, of Toronto, read a paper before the Ontario Medical Society, entitled "A Predisposing Cause of Hay Fever," which was afterward published in the Canadian journals, setting forth the uric-acid origin of the affection, and its treatment by soda salicylate and a proper diet.—*Medical News.*

The Prize and Premium Craze.—

In *Art in Advertising* Edward Bok writes in a philosophical manner of the present craze for getting subscribers for journals, or customers for a business, by offering premiums of some sort. When a journal does this sort of thing, he argues, it virtually confesses that on its own merits alone it is not a success. The same reasoning applies also to business houses that offer free chromos and spoons as inducements to buyers. But after all the chromos and spoons have been given out, remarks Mr. Bok, the droves of bargain-

hunters always go back to the better class of houses, feeling safer in dealing with them.

Who Fosters Quackery?—

Medical journals are more to blame for patents and proprietary frauds than the men who read them. With few exceptions, the journals are all living from patent-medicine pap, and that is why they are slow to raise their voices against the crying evil. I can name hundreds of the vilest patents that are lauded by reputable medical journals for their superior medical properties and their palatableness, when the publisher knows them to be arrant frauds. No wonder upwards of four hundred so-called medical journals can thrive in the United States.—*Medical News.*

Brass in Therapy.—

A few days ago I received a copy of an article enclosed in an envelope on the corner of which appeared the legend "Gold in Therapy." The word "Gold" appeared in gilt letters. I cut out two of these letters and examined the metal. I find it to be not gold, but brass. So that if the metallic sheen of these letters has any significance, the title of the article ought to be not "Gold in Therapy," but "Brass in Therapy." Aye, "Brass in Therapy." That is it exactly.—GEORGE HAY, in *Pittsburgh Medical Review.*

Food for Thought.—

How was it that Marion Sims, Flint, Agnew, Keating, Fordyce Barker, Sir Andrew Clark, Charcot, Billroth, and others, had so much time for literary work? And yet their professional duties were certainly as pressing as anyone's we know. It would seem that they felt the necessity of keeping their brains in good working order by writing; and if they thought so, no one could hardly be excused from saying, "Oh! I can find no time for writing."—*Rhode Island Medical Science Monthly.*

Ohio State Medical Society.—

At the meeting of this organization at Zanesville, the following officers were elected for the ensuing year: D. N. Kinsman, Columbus, President; C. O. Probst, Columbus, M. Stamm, Fremont, J. H. Buckner, Cincinnati, and Robert Peter, Canal Dover, Vice-Presidents; Thomas Hubbard, Toledo, Secretary; Charles Graefe, Sandusky, Assistant Secretary; James A. Duncan, Toledo, Treasurer. The next meeting will take place the third Wednesday in May at Columbus.

Vagitus Uterinus.—

In the New York *Polyclinic* Doctor H. Marion Sims cites a case in which the cry of the fœtus, while its head was yet within the uterus, was distinctly heard, showing that air had entered and the child breathed. The possibility of the occurrence is denied by some writers, yet on examining literature Doctor Sims found it less rare than is generally supposed.

Not in Good Standing.—

As a result of the investigations of the Missouri State Board of Health, the Northwestern Medical College of St. Joseph has been declared "not in good standing," and the diplomas of the recent graduating class will not be recognized.—*Omaha Clinic.*

A Leper Hospital.—

A hospital and laboratory for the treatment and study of leprosy has been established in Rio Janeiro. Doctor Wolf Havelburg, a German physician, for the past twelve years a resident practitioner in Brazil, has been appointed director.

Early Trephining.—

Doctor T. M. McKennon, of Pittsburgh, trephined an infant just born. There was such compression of the brain as to endanger life, from crushing the skull with forceps. Elevation of the fragment saved the life of the child.

Quintuplets.—

The wife of Mr. Rosenberger, of Kittanning, Pa., recently gave birth to five children. The birthplace of the children, although curiously spelled, has a significant association with the event.—*Medical Record.*

Archives of Pædiatrics.—

Commencing with the July issue, this well known journal will be edited by Doctor Dillon Brown, Adjunct Professor of Pædiatrics at the New York Polyclinic.

Nail Spots.—

White specks on the nails may come from glandular trouble, or from drugs; pale specks denote injury or impairment of nerve centres. —SAWYER.

Physicians in the United States.—

The total number is 118,453. New York leads, with 11,171; Pennsylvania has 9,310; Illinois ranks third with 8,002.—*Medical Record.*

Book Reviews.

THE CANADIAN MAGAZINE. Price. 25 cents; $2.50 per year. Ontario Publishing Co.

The June number is even more than usually valuable. Mr. Herbert B. Ames contributes a political article under the title of "The Machine in Honest Hands;" "A Japanese View of Japan" is by a native, viz., K. T. Takahashi; Doctor G. Archie Stockwell, F.Z.S., deals with "Foot Distortion in China;" J. W. Tyrrell furnishes the first portion of a paper describing the natives of Hudson Strait, entitled "Life Among the Eskimos;" Allan Ross Davis discusses "The St. Lawrence Canal Route;" C. M. Sinclair, in "On St. Clair's Broad Bosom," delineates the charms of the strait between the lake of the same name and Lake Huron. In "North-Western Wilds" is a continuation of William Ogilvie's experiences and explorations in the Northwest; "The Safest Ships Afloat," by Henry Fry, is a most excellent description of the steamers of the Canadian Pacific Railway plying between British Columbia, Japan and China; Mary Temple Bayard tells "How to Beautify a Home," Thomas E. Champion of "W. R. Meredith, M.P.P., at Home," J. Lambert Payne of "The Ottawa Conference." There are the usual "Gable Ends," which include a Scotch reading entitled "The Siller Weddin'," "Photo-Topography on the Alaskan Boundary," and "Sussex Vale in Winter." The poetry of the number is embodied in "A Greek Reverie," by Reverend James Cobourg Hodgins; "Sun Worship," by Albert E. S. Smythe; "Sandy Grey," by Alan Sullivan. The only fiction of the number is "Little Maid Marian," by Allan Douglas Brodie.

THE ATLANTIC MONTHLY. Price, 35 cents; $4.00 per year. Houghton, Mifflin & Co., Boston.

The June number contains "A Record of a Summer Spent in the Scillies," by Doctor J. W. White; a shipwreck-suggesting poem, "The Grave-digger," by Bliss Carman; Stoddard Dewey writes of "The End of Tortoni's," the famous Parisian café; Doctor Albert Shaw explains how Hamburg learned a lesson regarding cholera; Mrs. Cavazza gives an account of the "Marionette Theatre in Sicily;" Professor Manatt completes his excursion "Behind Hymettus;" Frank Bolles continues his wanderings in the Provinces. The fiction, besides Mrs. Deland's notable novel, is contained in one of Mrs. Wiggin's graphic stories, "The Nooning Tree." A group of Carlyle's letters not before printed, and reports of his conversation, are given by Sir Edward Strachey; a Western writer sounds the note of alarm in a paper on "American Railways and American Cities;" another Western professor treats of "The Scope of the Normal School." Among the papers in the Contributors' Club is a reminiscence of the *Kearsarge*.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 per year. Charles Scribner's Sons, New York.

The June number contains an article by John Heard, Jr., which tells the tragical story of "Maximilian and Mexico" in the light of many documents which have recently been published in France. Other articles are: "The Dog," by N. S. Shaler; "A Portion of the Tempest," by Mary Tappan Wright; "The Story of a Beautiful Thing," by Frances Hodgson Burnett, in which she tells of the rise and growth of a touching London charity officially known as "The Invalid Children's Aid Association;" "John March, Southerner," Chapters XXXV–XLII, by George W. Cable; "American Game Fishes," by Leroy Milton Yale; "A Pound of Cure," a story of Monte Carlo, Chapters VII–VIII (conclusion), by William Henry Bishop; "The Future of the Wounded in War," by Archibald Forbes; "The Point of View:" The Gentle Reader—Mrs. Anthony's Nolo Episcopari—Physical Aspects of Industrial Man.

THE OVERLAND MONTHLY. Price, 25 cents; $3.00 a year. Overland Publishing Company, San Francisco.

The June *Overland* is a noteworthy number. Rounsevelle Wildman gives another of his Malayan stories, entitled "Amok!" that describes a love affair, with tragic ending, of a young Malay couple; Doctor Frederick J. Masters contributes a most readable article under the caption "Did a Chinaman Discover America?" and adduces a multitude of facts to prove his contention—most striking of these is a quotation from the ancient standard Chinese encyclopædia, telling of the return to China of Hwei Shan, a Buddhist monk, after forty years in a country that must have been California or Mexico. There are two or three Fair articles; an interesting narrative, experiences of a "blackbirder" in the Gilbert Islands; a valuable paper by Doctor J. G. Cooper on "Pacific Coast Oysters;" and many other attractions.

ANTISEPTIC THERAPEUTICS. By Dr. E. L. Trouessart. Translated by E. P. Hurd, M.D. Two volumes. Cloth; square 16mo. Price, 50 cents per volume. Geo. S. Davis, Detroit, Mich., publisher.

The first volume is a study of antiseptics

from a chemical, pharmaceutical, and physiological point of view, and gives a description of antiseptics borrowed from inorganic chemistry.

Volume two gives the antiseptic treatment of diseases, offering a large number of formulæ and many practical suggestions. It is divided into ten chapters, giving the antiseptic treatment of nearly all forms of disease. A number of pages are added, at the close of the volume, on the antiseptic hygiene of patients and their environment. This is the practical application of the theoretical considerations advanced in volume one.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 a year. The J. B. Lippincott Co., Philadelphia.

The complete novel in the June number is "The Wonder-Witch," by M. G. McClelland; Gilbert Parker's serial, "The Trespasser," reaches its close. Other papers are: "Sea Island Cotton Respun," by Dora E. W. Spratt; "The Passing of the Essay," by Agnes Repplier; "The Rumpety Case," by Anna Fuller; in "The New Northwest Passage to the Orient," J. Macdonald Oxley writes of the Canadian Pacific Railway and its line of steamers to Japan; "Two in the 'Other Half'" is by E. Ogden Hays, "Hot Work on the Pampas" by Morgan S. Edmunds, "My First Literary Acquaintance" by R. H. Stoddard. The poetry of the number is by M. S. Paden, Ella Gilbert Ives, Sara Matthews Handy, Ulysses Francis Duff, and Charles G. D. Roberts.

DISEASES OF THE SKIN. By Malcom Morris, F.R.C.S. Cloth; 12mo; pp. 572. Price, $3.50. Lea Brothers & Co., Philadelphia.

The author's earlier contributions to literature have already spread abroad the reputation he enjoys as a dermatologist. His present work is entirely new, and essentially clinical and practical in scope. The illustrations include nineteen chromo-lithographic figures, so contrasted as to facilitate the discrimination of diseases which though essentially distinct yet possess similarity of appearance. In a word, the volume is a compact presentation of the most modern and practical dermatology.

ESSENTIALS OF NERVOUS DISEASE AND INSANITY. By John C. Shaw, M.D. Cloth; 12mo; pp. 194. Price, $1.00. W. B. Saunders, Philadelphia.

This is Number 21 of Saunders' Quiz Compends. That it has met with a due measure of success is apparent, as it is now in a second edition. It is not calculated as a text-book *per se*, but to be employed in conjunction with Edinger's lectures on the "Structure of the Central Nervous System," and the monograph of William Browning on "The Vessels of the Brain."

ESSENTIALS OF PHARMACY. By L. E. Sayre. Cloth; 12mo; pp. 200. Price, $1.00. W. B. Saunders, Philadelphia.

This is a complete revision of the text of a former book, and made to correspond to the U. S. Pharmacopœia of 1890. Numerous additions have also been made, notably an outline of drugs and plant analysis, structural formulæ of organic carbon compounds, pharmaceutical testing of inorganic chemicals, problems in alligation and specific gravity.

LITTELL'S LIVING AGE. $8.00 a year. Littell & Co., Boston.

The character and scope of this journal are so well known as to make any special reference thereto almost unnecessary. With June the first volume for 1894 will be completed. To any who desire a trial subscription, we would advise securing the succeeding twenty-six numbers for this year.

NURSES' DICTIONARY. By Honnor Morten. Cloth; 24mo; pp. 140. Price, $1.00. W. B. Saunders, Philadelphia.

This is the second enlarged edition of this volume, which seems to have met a want. It is not intended to replace the larger medical dictionaries, which of course are as essential to the nurse as to the physician, but merely as a temporary bedside reference-book.

THEY WANT NAMES.—The Russell Art Publishing Co., of 928 Arch street, Philadelphia, desire the names and addresses of a few people in every town who are interested in works of art, and to secure them they offer to send *free*, "Cupid Guides the Boat," a superbly executed water-color picture, size 10 x 13 inches, suitable for framing, and sixteen other pictures about same size, *in colors*, to anyone sending them *at once* the names and addresses of ten persons (admirers of fine pictures) together with six two-cent stamps to cover expense of mailing, etc., The regular price of these pictures is $1.00, but they can all be secured free by any person forwarding the names and stamps *promptly*.

A DECEIVER.—Vick's New Branching Aster when out resembles the chrysanthemum so closely that only experts can tell the difference, and as it comes into flower six weeks before the latter and at a time when flowers are scarce, it is a great temptation to the florist to sell these Asters for "mums." The Branching Aster can be easily grown out-doors, so that every person who has a foot of ground can enjoy a grand treat for almost nothing.

Send 10 cents to James Vick's Sons, Rochester, N.Y., for Floral Guide; it practically costs nothing, as the 10 cents may be deducted from first order.

Therapeutic Brevities.

Chloroform and Morphine in Chorea.—In the *British Medical Journal*, Doctor Churton relates the case of a girl, seventeen years old, with a rheumatic history but no existing arthritis, who came under observation in an attack of moderately severe chorea. The movements increased rapidly in violence, unchecked by chloral given frequently in doses of twenty grains. Beginning with one sixth of a grain of Morphine hypodermatically, immediately followed by the inhalation of Chloroform for a few minutes, and gradually increasing the dose of Morphine to one-half grain, always in conjunction with inhalations of Chloroform, the movements were kept under control with the greatest ease. The smaller doses produced sleep lasting from one to three hours, the patient waking no better; but after the dose of one-half grain she slept almost uninterruptedly for nine hours, and was then so greatly improved as to require no further medication except by the mouth—in fact became an ordinary, mild case, and left the hospital well at the end of about six weeks. With moderate doses of Morphine there is often a delay of many minutes before sleep occurs; the inhalation of Chloroform for two or three minutes produces immediate sleep, which is continued by the action of Morphine. If necessary the Chloroform may precede the injection of Morphine.

Treatment of Chronic Valvular Disease.—Doctor James Tyson, in the *American Journal of the Medical Sciences*, points out relief is often obtained from the occasional use of purgatives—five to ten grains of blue mass, followed by a saline, or the continuous use of small doses, one-half to one grain thrice daily. The greater apparent effect of the infusion of digitalis is due to its use in larger dose, although it is likely to be better borne by the stomach. Strophanthus, better borne by the stomach, has been used in doses of ten minims every two hours for forty-eight hours without interruption.

Caffeine in three-grain doses every three hours, in mitral regurgitation, is admirable, but likely to induce insomnia. Sparteine in one-quarter-increased to one-half-grain doses, three to five times daily, is of value if a diuretic be desired. For irregularity of heart action and palpitation, more common in mitral disease, belladonna is very useful; a belladonna plaster placed over a palpitating heart is a most efficient agent. Nitroglycerin, one-hundredth of a grain, increased to double the quantity, three times daily, often serves the same end.—*Medical Standard.*

The Uses of Cod-Liver Oil.—The function of fat in the economy is to produce force, and it is, therefore, demanded by the tissues in direct proportion to their activity, which is (1) nervous, (2) growing, (3) muscular, (4) glandular, (5) mechanical:

As a nerve food in early childhood, and as a prophylactic against ulcerative diseases of the eyes, asthma due to weakened mucous membranes, convulsive diseases, and in many cases tuberculosis:

Combined with other remedies for the treatment of true nervous diseases, such as epilepsy, neuralgia, megrim, etc., notably so if hereditary:

For chronic rheumatism, essentially a skin disease:

For diabetes mellitus and chronic forms of Bright's disease where there is anæmia but no gastritis:

For phthisis, to facilitate cough and sustain strength:

For skin diseases of a scaly nature, not dependent upon toxæmia:

For fevers where the temperature is not above 100° F.:

For all diseases where there is suppuration.—*Gross Medical Bulletin.*

Alcohol in Diphtheria.—In the *Medical Times* about 1887, Doctor Guernsey, of Philadelphia, declared Alcohol to be the "prince of antiseptics, and the most perfect and reliable medicine of which we have any knowledge in diphtheria. Diluted with equal parts of water, and given in small and repeated doses, the malignant symptoms of this most fatal malady soon disappear, and convalescence becomes assured. And it is interesting to note with what facility the Alcohol dissolves the diphtheritic exudation in the throat, lowers the temperature and calms the pulse, showing a destructive action upon the germs of the disease which have been absorbed by the glands and gained access to the blood. This remedy has been used by me in the treatment of diphtheria since 1873, during which time no case of the disease has slipped through my hands."

I have myself used it in more than fifty cases without the loss of a single patient. I have also used it in scarlet fever and typhoid fever with the same results.—Oliver S. Lovejoy, in *Medical Brief.*

Cascara Sagrada as a Diuretic.—Some little time ago I noticed Cascara Sagrada increased

frequency of micturition. I could then find no cause for this. Shortly after I again took the drug, and again noticed the same effect. As I could find no reference to its action as a diuretic, I began to watch its action on my patients, and in the majority of cases found it to act as a diuretic. In one case the effect was marked, as the patient himself complained of the number of times during the day he was obliged to urinate. I analyzed his urine and found it to be quite healthy. On stopping the Cascara he ceased to be troubled. One of my medical brethren told me that he also had noticed this same effect of the drug upon himself. The Cascara Sagrada that I use, and have always used, is the fluid extract of Parke, Davis & Co. I should be interested to hear if this diuretic action has been observed by others.—DOCTOR MILNE HEY, in *British Medical Journal.*

Quinine as an Oxytoxic.—Quinine does not exert its influence directly upon the uterus, but does act indirectly. When inertia is due to depression of the vital forces, Quinine in small doses becomes a valuable stimulant.

When given to promote uterine contraction it does not produce unnatural and persistent pains that are so often produced by ergot, which endanger the life of both mother and child.

The same effect can be obtained by administering it in much smaller doses than were formerly given, thereby not causing the patient any unpleasant symptoms.

Patients who take Quinine as an oxytoxic where it is needed, have but little trouble during parturition.—DOCTOR C. W. CANAN, in *American Medico-Surgical Bulletin.*

The Coal-Tar Antipyretics.—In the *Memphis Medical Journal* Doctor Haynes discusses the coal-tar antipyretics, and declares that according to his experience the medical profession "can do very well without them." He concludes the dissertation as follows:

"I cannot understand how a physician can tell how well his patient is getting along when he finds him under the influence of one of these drugs. Fever is the 'sign-board,' as it were, to the pathological changes taking place. My opinion as to the place of these drugs is as anodynes, and, on rare occasions, as antipyretics. And in conclusion will say, use fewer drugs and more of God's greatest and most abundant exhilarant—water."

Myxœdema and Thyroid.—In *Centralblatt für Chirurgie,* Laache reports the case of a baker fed on the thyroid gland of the sheep prepared as a glycerin extract, in the form of a bouillon, and later in a raw state with a little salt and pepper. The dose was at first seventy-five grains daily, but, disagreeable digestive symptoms supervening, it was reduced to forty-five, then to thirty, and finally to fifteen grains every second or third day. At the end of five weeks' treatment the patient began to increase in weight and had materially improved. He was sent home, and advised to repeat the treatment at varying intervals.

Yeast in Typhoid Fever.—Doctor M. B. Thompson, in an Australian contemporary, records the treatment of thirty-seven cases of typhoid by Yeast. Ten were severe, the temperature reaching or exceeding 104°; eight moderately severe, temperature reaching or exceeding 103°; eleven were mild, although the temperature reached 103°; eight were very mild, the temperature never being above 102°. In all recovery took place without any relapse. This point is worthy of note, inasmuch as, according to Fagge, the average proportion of relapses is from two to eleven per cent.

Thuja Occidentalis for Uterine Polypus.—Under the use of Arbor Vitæ, in a few days the hæmorrhage ceased. The patient improved rapidly, and in a few weeks left her bed. The remedy was continued for several months, as the monthly hæmorrhage at the periods continued considerable. In about four months a polypus was cast out of the uterus with a pedicle several centimeters long, which was easily snipped off, though it would have come away of itself if left alone. —*Monatsblätter.*

Hydrastinine.—Unfavorable results following the administration of Hydrastinine are reported by Doctor Wild. He observed as the result difficulty of deglutition, violent pain in the neck, patches in the throat, with the surrounding mucous membrane greatly inflamed. The intoxication produced is similar to that of atropia, producing paralysis of the secretory nerves; therefore the throats of patients should be frequently examined while this remedy is being administered.—*Exchange.*

Therapeutics of Boldo.—In a case of atonic dyspepsia associated with hepatic torpor, fluid extract of Boldo gave me a pleasant surprise in the large measure of relief resulting from its exclusive use. It was purposely given alone, the better to determine its value, and

in a case that for years had resisted every effort. Perhaps the best thing that can be said of the result is that it has been permanent.—DOCTOR R. B. MCCALL.

Oil of Gaultheria in Neuralgia.—My attention was first called to the use of this drug ten years ago, when I obtained most pleasing results in the treatment of inflammatory rheumatism, and afterwards in neuralgia. While not a champion of any specific, I want to say that this drug has given me the quickest and most satisfactory results of any remedy in the materia medica.—DOCTOR BENJAMIN F. LANG, in *Homœopathic Recorder.*

Normal Liquid Veratrum Viride in Puerperal Convulsions.—Doctor Davis claims, in the *Virginia Medical Monthly*, from an experience in twenty-five cases occurring during thirty-five years of practice without the loss of any case, that Veratrum Viride will control puerperal convulsions when administered in large doses, and that it is perfectly safe to administer in quantities sufficient to control any case of convulsions.

Tansy in Epilepsy.—S. A. Siminoff details three cases of epilepsy effectually relieved by administration of an infusion of common Tansy. He has also used the decoction with good effect in cases of neurasthenia, where valerian had ceased to be effective. A glassful of the infusion of the herb (either fresh or dried) is given to the patient at night and in the morning.—*Scientific American.*

Resection of Lung.—Tuffier has resected the apex of the lung for tuberculosis; the affected portion was first ligated, then removed, and found to contain tuberculous deposits, in which were the characteristic bacilli. The wound healed by first intention, and the patient made a speedy recovery; has resumed work, increased in weight, and is free from cough.—*Medical Times.*

Ulcer of Stomach.—To combat the nausea and vomiting, a pill containing one-eighth grain of extract of belladonna and one-half grain of silver nitrate may be used with advantage; the latter exercises a decided influence on the ulcerated surface, and by being converted into an insoluble chloride diminishes or neutralizes the hydrochloric acid present in the stomach.—WOLFF.

Iris Versicolor.—Blue Flag is possessed of not only a powerful alterative action, but it is likewise one of the most efficient antisyphilitics. Fullness of throat, enlargements of thyroid or of lymphatic glands, especially if soft and yielding to pressure, are readily amenable to this remedy. Irisin is entitled to first place among anti-syphilitics. —*Eclectic Medical Journal.*

Cocaine in Fractures.—Doctor Grigorieff, a Russian surgeon, when setting a fracture or reducing a dislocation, renders the manipulation painless by injecting Cocaine at three or four points in the neighborhood of the injury; he employs a five-per-cent. solution, injecting fifteen minims at each point. This not only deadens all sense of pain, but relaxes the muscles, etc.

Ipecac.—Relieves irritation of mucous membranes if accompanied with catarrhal discharge; relieves engorgement of the lungs, and restores irritable bronchi to a normal condition. In minute doses, relieves irritation of the stomach, and controls vomiting if accompanied with intense and persistent nausea.—*Medical Summary.*

Retention of Urine in Children.—It is often the case that an enema thrown into the rectum will so stimulate both the centres for defæcation and the genito-spinal centre for urination as to bring about micturition without catherization—a proceeding always dangerous in young children, unless anæsthetized. —*Medical Times.*

Vomiting of Pregnancy.—Doctor Weill claims that every form of vomiting during gestation can be relieved by a twenty-per-cent. solution of menthol in olive oil; dose, ten drops on sugar whenever nausea appears.

Freckles and Pigmentation of Chloasma.—

℞ Copper oleate, 2 to 4 grammes.
Benzoinated lard, 32 grammes.

Apply freely.

Leg Cramp in Pregnancy.—Administer at bedtime five milligrammes of sulphate of copper. This can be given every night without inconvenience.—*La Gazette Médicale.*

Ulcers and Fissures.—Compound tincture benzoin is recommended by Doctor H. S. Purdon. Labial and lingual fissures quickly heal under its application.

Copper Sulphate.—This should never be employed as an *emetic* except in cases of phosphorus poisoning, in which case it acts as a chemical antidote.

Medical Progress.

BONA FIDE FACTS ABOUT BONES.—

We have more than two hundred bones in all,
Plenty to break, should we happen to fall;
But should this occur, don't go to a bone-setter,
A qualified doctor will mend you much better.
These bones, says Mr. Huxley the sage,
Vary at different times of age.
But not e'en the humblest seems to lack
Thirty-three Vertebræ down his back.
Now, twenty-four of these said bones
Are really happy in their homes;
But then come five who say, "'Tis humdrum
To keep like this, let's join the Sacrum."
The next four say, "If them's your tricks,
We'll join the club that's named the Coccyx."
Now if this is not one of old Huxley's fibs,
Every one numbers twenty-four Ribs—
Twelve on each side, and all neatly connected,
With Cartilage to Breastbone clearly detected.
In the girdle which binds the shoulders around
Two sizeable bones are very soon found—
Scapula and Clavicle, very grand names,
But to say them too often might turn any brains.
The Pelvis, to which both the legs hold on,
Consists of two bones like the name of a song—
Oh "Ossa innominata" sounds grand sung—
These divide into three while you're very young;
And if I do not tell you at once
The names of these three, you will say I'm a dunce:
So Pubis, Ischium, and Ilium they are—
They sound quite absurd, but blame their mamma;
For she being young, and only a woman,
Said these very queer names were so "sweetly uncommon."
If you suffer from rheumatism in either arm,
Thirty bones there may well give you alarm;
Thirty bones in each leg too has every feller,
By counting the knee-cap, or Patella.
Before passing on in quite easy stages,
These bones bind together by Cartilages;
And where they play freely, one over the other,
A Cartilage coat prevents all bother;
And should you wish to be very particular,
This Cartilage goes by the name of Articular.
These, by a delicate membrane lined,
Secrete oily fluid—isn't that kind?
This liquid is always called Synovial;
If that runs short, you won't feel jovial.
As you may have already thought,
The feet are the surfaces of support.
But should the muscles of Calf not contract,
You'd tumble forward, that's a fact.
But this act would bend the leg one way,
So the front of the Thigh muscles come into play.
E'en then, though you try with all your might,
Without help from the Back, you can't stand upright.
To be governed by legs is hard, but depend on,
You'd certainly be worse, if they weren't there to stand on.
Now before I leave this subject, I beg
You will learn the names of the bones in your leg.
The Femur, which lasts from the Thigh to the Knee,
Is a most useful bone, as of course you all see.
And then too, below the knee we find
A Tibia in front, and Fibula behind.
The Tarsus, and Metatarsus, bones come next—
I can't find a rhyme, so you mustn't be vext.
Then last, and least, comes Phalanges or Digits,
These covered with chilblains, will soon give you fidgits.
Before going on, there won't be much harm
In saying the names of the bones in your Arm.
Like the bones in the leg, they are really not numerous,
But from Shoulder to Elbow, you'll find one, called Humerus,
Then come Radius and Ulna, from Elbow to Wrist,
And there are a few others, who lodge in the Fist—
Carpus, Metacarpus, Phalanges, or Digits
Are their sweet pretty names, but these are but midgits.
Then poor little Pollex, the joy of each child,
Of whose virtues and faults, Palmists don't draw it mild.
Now although my Lecture is almost done,
We must speak of the Skull, before we go home.
And in adult life, our head contains
Twenty-two bones, and sometimes brains.
The number is greater still in youth—
I'm telling you nothing but the truth.
In old age again, the number's less,
Less trouble to sort, should they get in a mess.
Now the Nasal and Frontal bones come first,
Though should you get injured, these are not the worst.
But should a brick fall on Parietal or Occipital,
Just take a cab to the very best Hospital,
And kind doctors there, if they see you're not shamming,
Will put you to rights, with a little trepanning.
The Mandible bone is the last bone of all,
And it's none the less useful because it is small.
Now, perhaps, you are glad that the bones are all done,
As this makes a good finish to Lecture One.

—E. M. C., in *The Hospital.*

THE LYMPH CELLS.*—The chemistry of the lymph cells must not be restricted to an enumeration of their constituents and to an exposition of their properties and chemical constitution; it should also afford information respecting the distribution of substances in the cell, and the relation of chemical constituents to the anatomical elements. Accordingly the investigations with respect to the chemical composition of the lymph cells have progressed along two different lines. In the first method of investigation the material is to be obtained in considerable quantity from the lymphatic glands, especially from the thymus gland, by expression and centrifugation.

We first distinguish "primary cell substances" which are to be encountered in every cell capable of development, even in the most youthful; to these belong albuminous bodies—lecithin, cholesterin, and several inorganic substances, among the latter the acid potassium phosphate. The nucleins also belong in this class. "Secondary cell substances" are such as are not to be

*Abstract of paper by A. Kossel.

encountered in every cell capable of development, being observed only in certain cells, and occurring as a rule in certain stages of development. Such are glycogen, the fats and protagon, inosit and amidovalerianic acid, a decomposition product of the albuminoids. Among the first-named substances the nucleins occupy the first place with regard to quantity. The nucleinic acids contained therein in turn contain nitrogenous cyclical groups (adenin, guanin, hypoxanthin and xanthin) and exhibit an intimate alliance with uric acid, the latter being formed by constituents of the cell kernel. Among the decomposition products of nucleinic acids of the thymus, the crystalline thymin is to be mentioned. It is erroneous to regard the albumen alone as the most important constituent of living substances; an equally important rôle should be attributed to the nucleinic acid. The nuclein is formed from this acid and albumen; combined with nuclein we find in the lymph cell still another body of albuminous nature—the histon. The whole is termed nucleohiston. The histon was obtained synthetically by Kossel from protamin and albumen. From the combination which was thus formed, however, it has not yet been possible to obtain the protamin through disintegration; which must be attributed to the as yet little known properties of protamin, but should be ascribed in part also to the peculiar property of the so-called "prosthetic groups," by virtue of which they combine more tenaciously with the molecule of albumen, as has been shown, for example, by Schmiedeberg with respect to iron.

In order to follow the distribution of nuclein combinations under the microscope, the mixture recommended by Ehrlich of methyl-green and acid fuchsin should be employed. The albuminoids combine with the acids, the nucleinic acid with basic coloring matter. Accordingly the first assumes a pure red coloration, the latter a pure green tint. In the combinations of albumen and nucleinic acid the color is of a mixed character: in the nuclein of pronounced acid reaction the color is bluish green; in the nucleohiston it is violet. In the passive or stationary nuclei of the lymph cells the violet hue predominates, whereas during mitosis and in other physiological conditions the green coloration indicating the undisintegrated nucleinic acid is developed by the Ehrlich mixture. The conditions under which the liberation of the nucleinic acid occurs in the cells, and the relation of the coherence to the combined albumen, have thus far been little investigated. It could only be determined, in accordance with the statement of Neumann, that the lymph cell of the thymus gland is best suited, among all the organs thus far investigated, for the production of the free nucleinic acid.

The ready combination of nucleinic acid with albuminoids explains its pronounced bactericidal properties, which have been investigated by Kossel; 0.5-per-cent. solution of nucleinic acid is capable of destroying in a short time cholera and typhus bacilli, as well as pyogenic cocci. Nucleinic acid is probably a defensive substance employed by the organism in combating pathogenic bacteria.—*Chemisches Central-Blatt.*

RHEUMATIC NATURE OF CHOREA.—Before the Eleventh International Medical Congress at Rome, Sir Dyce Duckworth read a paper with the above title, a summary of which is here presented:

Chorea is not only related to rheumatism, but is itself a variety and a manifestation of this disease.

It is a form of cerebral rheumatism, representing one of the many extra-articular varieties of this disease.

Lesions may be found in the heart and in the brain, and, as far as we can say to-day, the cortical region is the part involved.

It is impossible to distinguish, during life or after death, any difference between the endocarditis due to rheumatism and that which is supposed to be due to chorea.

Shock, mental overwork, or physical emotion, are the causes ordinarily producing chorea, but these can give rise to the disease only in children who have inherited the rheumatic habit.

The symptoms of chorea point to the action of certain systemic poisons, and, as these have been shown to be the efficient cause of rheumatism in about eighty per cent. of all cases, so we ought to conclude that they are the efficient cause of all cases of chorea, or that at most in a small percentage the disease results from the action of some other toxic substance having a remarkable affinity to the rheumatic poison.

As the manifestations of rheumatism are now clinically recognized in parts of the body other than the joints, so chorea may be considered as a variety of rheumatism specially affecting the brain.

EARLY DIAGNOSIS OF SMALLPOX.—The initial fever is sudden in its advent, and on the first day of illness the temperature runs up to 102° F. or more.—This brusque ad-

vent of pyrexia is met with in only two other acute specific diseases that are common in such a climate as that of England; namely, scarlet fever and erysipelas. Of the symptoms that accompany the initial fever, severe pain in the back and nausea or vomiting are prominent. Both are usually more pronounced than in either scarlet fever or erysipelas, and the failure of the cutaneous lesions characteristic of one or the other of these diseases to appear within from thirty to forty hours will exclude them. The rash that in exceptional cases precedes the true eruption of smallpox may, however, be scarlatiniform; but in only about one-fifth of the cases does it appear earlier than the third day As to the true exanthem, it is chiefly to be distinguished from that of measles. In both measles and smallpox the eruption appears on the fourth day, and in both it is papular, but in measles this character is less pronounced and rapidly grows fainter, while in smallpox the "shotty" feel goes on increasing up to the time of vesiculation; at the end of twelve hours the efflorescence of measles begins to fade, moreover, but the smallpox papules get harder and harder. This "shotty" feel is so characteristic that by passing the hand over the forehead and cheek one might almost diagnose smallpox in the dark. In spite of all this, doubtful cases will now and then occur, and in all such cases the patient should be secluded.—*St. Louis Medical and Surgical Journal.*

THE MECHANISM OF LABOR.—The chief factor in determining anterior rotation of the lowest portion of the presenting part is the resistance of the pelvic floor:

Complete forward rotation of the presenting part is the rule in primiparæ; it often fails in multiparæ:

Excessive rotation of the head is a rare condition:

A permanent occipito position is more common in multiparæ than in primiparæ, other things being equal:

Complete shoulder rotation occurs with about equal frequency in primiparæ and multiparæ:

In primiparæ and spontaneous delivery the anterior and posterior shoulders appear first with about equal frequency:

In multiparæ and spontaneous delivery the posterior shoulders appear first more frequently than the anterior:

In spontaneous delivery the posterior shoulder is born first more frequently in both primiparæ and multiparæ—three times as frequently as the anterior in primiparæ, two and one-half times as frequently in multiparæ:

The posture of the parturient does not appear to affect the mechanism of shoulder delivery:

Manual extraction of the shoulders was found to increase the percentage of perineal lacerations.—*American Journal of Obstetrics.*

THE INDICATIONS FOR BLEEDING.—Sir Benjamin Ward Richardson is fond of venesection, and in the *Æsclepiad* gives the indications for bleeding as:

In acute spasmodic seizures, as in spasms of croup, in colic and in angina with symptoms of oppression from distension of the right side of the heart with blood:

In acute pain, membranous or spasmodic, as in sudden pleuritic or peritoneal pain, or in pain from passage of a calculus hepatic or renal:

In acute congestions of vascular organs, as of the lungs or brain, apoplexies:

In cases of sudden shock or strain, as after a fall or a blow, sunstroke, or a lightning shock:

In some exceptional cases of hæmorrhage of an acute kind, unattended by pyrexia.

RELATIONS BETWEEN THE UTERUS AND THE EYE.—Doctor Janot declares certain ocular troubles exist in relation with different physiological and pathological conditions of the uterus, and that to institute efficacious treatment it is important to establish their origin. These ocular lesions are much more tenacious when the uterine troubles have persisted for a long time. In a large share of cases they are attributable to infection. Treatment should be addressed to the local condition of the uterus and the vagina, to the local state of the eye, and to the general condition of the patient.—*Medical Times.*

RELAPSE IN TYPHOID.—Doctor Hugh M. Stewart, from an analysis of several cases, in *The Practitioner*, believes that so-called relapses of typhoid fever are genuine second attacks, repeating all the phenomena of the first, and due to reinfection of the large intestine from the small. This reinfection generally takes place at a definite period in the original attack, and is probably effected by the passage of sloughs over healthy lymphoid follicles. Constipation is an important predisposing cause of relapse. The prognosis of relapse is good.

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REMINISCENCES OF MEDICAL STUDENT LIFE FIFTY YEARS AGO.

BY EDWARD WORTHINGTON, M.D.

It may perhaps be of interest if I relate some of the difficulties that had to be met by the medical student fifty years ago.

The younger part of the profession of the present day know nothing about it by experience, and the literature on the subject is scant and unpopular. The student of 1894 walks into the lecture room, a host of students sitting on an amphitheatre of elevated seats in a well lighted and well ventilated room. The "subject" is on the table before them, all the parts having been already carefully and cleanly dissected. The lecturer, or demonstrator, comes in and points out the different parts—the distribution of the blood-vessels and nerves, the origin, insertion, and use of the different muscles, the importance of this or that part as a guide in surgical practice, etc., etc.—and then the student walks off to another lecture, after leaving his card or answering to the "roll-call." He need not take off his gloves, and he needs no perfumery. If, on the other hand, he wants to do some practical work, in obedience to the prescribed *curriculum*, he walks into the dissecting-room, and there he is provided with a leg or an arm, a head or a thorax, and goes to work, and as he works he reads the plan of campaign in the "Dublin Dissector" or some other manual of anatomy. Then he "does" a capital operation or two on the dead subject.

He has had no trouble in procuring these necessary things; he will have no trouble in disposing of the remains—all this is done for him. Verily "the lines are fallen unto him in pleasant places!"

Before the enactment of laws regulating the supply of "subjects" to the schools, the only possible way by which the student could acquire a knowledge of anatomy was by providing the subject for himself, sometimes at great personal risk. Now and then came the munificent gift of a criminal, condemned by the judge's charge to have his body given to the doctors for dissection. His opportunities were further enhanced by the death of a "pauper whom nobody owned," by occasional inquests or post-mortem examinations—these last being for the purpose of inquiring into the cause of death (and frequently failing in that object), and affording an opportunity, eagerly seized, of freshening up one's memory *and of appropriating some special organ for private examination!*

Anatomical drawings were, and no doubt are still, of great assistance to the student, drawn and colored as they are in the highest style of art. Marvellously artistic models in wax, showing in sections or layers the different parts of the human body and organs of special sense, were made as aids to science; but the British surgeon never took kindly to them, except as ornaments. When he cut into living tissues where a slip of the knife might be fatal to life, he wanted a knowledge that could be imparted only by the same tissues in the dead subject. Madame Tussaud's wax-works were very well in their way to amuse the British public, but the student wanted more than amusement.

Not so many years ago it was not an uncommon thing to read of how graves had been opened in country parishes, or how bodies stolen in these same country parishes had been sold to the medical schools in the United States and Canada. The professors of anatomy, unwilling to face danger or suspicion themselves, or through their students, had to buy from whoever had to sell. All this applies more particularly to dissecting-rooms attached to anatomical schools in large cities, but in private rooms before the passing of the Anatomy Act the students had to get their own subjects the best way they could—or, do without them.

Now and then the assistance of a "resurrectionist"—I call him so for want of a better name—could be had for the reward of a few dollars "and a bottle of gin," but, as a rule, the assistant drank the gin while he encouraged the youngsters to do the work. On one memorable occasion my senior fellow-student (whom I shall here call Bob) and myself left one of these fellows for a minute while we went to see if the horse and sleigh were all right, and when we returned the wretch was fast asleep—in the grave—beside the subject. It would have saved us a good deal of trouble if we had covered him up, then and there, for as we drove home he was very noisy. He sat beside me as I drove. Bob sat behind, the subject beside him in an upright position—he was so frozen we could do nothing else, but to make him pass muster we put a "bonnet rouge" on his head. As we drove through a crowded part of the city, before a brilliantly lighted window, my companion suddenly tried to seize the reins, crying out to passers-by on the sidewalk, "Come on, boys, and have a drink." This generous invitation had no charms for me, so I gave him a gentle reminder which dumped him onto the sidewalk, and drove off as fast as the horse could go. An hour afterwards he walked into the house, somewhat sobered, but very indignant. We gave him five dollars, which was "in the bond," but, like Oliver, he wanted more; he had been abused, and would have his revenge. His last awful threat was that he would *tell the Bishop!* On this we led him gently to the big front door, where we gave him an emphatic farewell. He did not tell the Bishop! He had been the official grave-digger for years, and a too limber tongue might have imperiled his occupation.

Happily, all this kind of thing is now over—and forever. My last personal experience dates back to 1840, and I do not want another. There was a rule in our room, and in that of the French Canadian students of the old city of Quebec, that no bodies should be taken except those of persons who had died in hospital, or who had no friends whose feelings might be wounded; that everything should be done as decently as possible, and the graves left as they were found—not so much to avoid detection as to avoid wounding the feelings of the public.

Only once was that rule broken, and, sad to say, it was in our room. One night, in a blinding snow-storm, through some stupid blundering, the wrong grave was opened—a grave on the opposite side of the yard. We never could understand how the mistake had occurred; but when the dear, sweet face met our gaze, in the dissecting-room, there was a cry of deep sorrow. We had all known her, and knew of her death. Then and there we made a solemn vow never to speak of it, never to whisper it, even to each other, after that night—and loyally we have kept our word. Wrapping her up tenderly, we *at once* carried her back, and appealed to the sexton for his assistance. Like the brave, tender-hearted man that he was, in mercy to the family and to us, he gave us the key of the chapel and lights. The grave was reopened and the coffin brought into the chapel. There we dressed her again in her robes, and then we buried her, and as we did so some bitter tears were shed, and one of our number repeated aloud a short prayer—and so we left her.

* * * * * * * *

I have recently been asked how it was that we had dissecting-rooms in Quebec when we had no medical schools. Why is it that we sometimes have bread when we have no butter? Every medical man in the city who had any practice at all had a private pupil. Some had three or four. The student was bound by law to pass an examination and show a certain amount of anatomical knowledge before he could legally begin the practice of his profession. By "law" he was bound to dissect, by "law" he might be punished for dissecting. Strange inconsistency!

Through the kindness of a friend, I have a list of all the licentiates of the Provincial Medical Board from the twenty-eighth year of the reign of His Majesty George III. Heading that list is the name of "Henry Leodal, 1788," whose bust is to be seen to this day in the hall of the Montreal General Hospital. Looking down the list, among a crowd of well remembered names are those of "Joseph Painchaud, 1809," and "James Douglas, 1826," both of Quebec. The first medical lectures ever given in Quebec, of

which I have any knowledge, were given by these gentlemen, at the Marine and Emigrant Hospital, beginning on the 1st of May, 1837–38–39.

The subject of Doctor Painchaud's lectures were, as set forth on the hospital tickets, which I have by me: "Sur l'Art et la Science des Accouchements" and "Sur la Theorie et la Pratique de la Medecine." Those of Doctor Douglas were on "The Principles and Practice of Surgery." These gentlemen constituted the medical staff of the hospital, and the governors or "commissioners" were Hammond Gowan, Joseph Morrin (afterwards founder of Morrin College), and Joseph Parent. Doctor Painchaud lived opposite the Artillery Barracks —Palace Gate. He used to do most of his visiting in the city on horseback, and I have a remembrance of only one horse—it was at least 16 hands high, bay, with a short stub of a tail, which when the horse was in motion seemed to act as a propeller—it went round and round like an "Archimedes screw;" the horse had evidently been a military charger, he was so thoroughly trained. It had often been a great puzzle to me how the Doctor could ever get on the outside of such a high horse, but the horse was equal to the occasion. The Doctor was not above the average height, and inclined to be stout; he had a kindly, smiling face, and was resplendent in waistcoats—worn almost as loose as a blouse, of purple or bright scarlet silk—and most exquisitely got-up shirt frills. Wellington boots he wore, with his trousers strapped tightly down; silver spurs and chains; and in his "fob" he carried a heavy bunch of seals. When entering a house he drew the rein over the back of the saddle, and allowed the horse to roam at his own sweet will. When he came out he called, or blew a small whistle, and the horse marched up, got his piece of sugar, wheeled his left side to the sidewalk for the Doctor to mount, and off he went prancing, to the great admiration of the small boys.

Doctor Painchaud had for many years the largest French-Canadian practice in Quebec.

Doctor Douglas lived on Mountain Hill, in what is now known as the Mountain Hill House. He was educated in Edinburgh and London. After obtaining the M.R.C.L., he went on a long whaling voyage to Hudson's Bay; then he went down the Mosquito Coast, and after seeing some of its terrors and almost becoming a permanent settler he went to Utica, in the State of New York, lectured for some time in Williams College, and finally went to Quebec, where in April 1826 he was licensed by the Medical Board. It is difficult to get precise information about this Medical Board, but as near as I can ascertain there were five or seven members, "Commissaire appointé pour l'examin des Candidates pour License." The examinations must have been very primitive, but upon the recommendation of the examiners a license was issued—or otherwise—and signed by the Governor in Council.

Afterwards the members of this Board were increased in number and met alternately at Quebec and Montreal. My license was issued in August, 1843, and is signed by Sir Charles Theophilus Metcalfe, Governor, and Dominick Baly, Secretary.

It was not until 1847 that the Medical Profession was incorporated as the "College of Physicians and Surgeons of the Province of Quebec," and all licenses from that date were issued by that body.

Doctor James Douglas was the most brilliant operator I ever saw—and I have seen some good men in my time, here and in the old country. It was not only that he did his work quickly, but he did it well, and his operations were simply splendid. I remember a poor fellow in the Marine and Emigrant Hospital at Quebec, who from frostbite was obliged to have both legs removed just above the knee. It was decided to have the double event come off at the same time —two legs—two operators—with the object of saving the patient as much as possible. From the instant the point of the knife entered, until the leg was on the floor, was *one minute and forty-two seconds*, in Douglas's case. The vessels were tied and the wound dressed inside of three minutes. The other amputation was not quite finished in half an hour, when some of us had to leave! The case did well. No anæsthetic was known in those days. It was sheer pluck on the side of both patient and doctor.

Of the pupils of Doctor James Douglas, all whom I know of now are Doctor George E. Fenwick—my life-long friend—and Doctor

J. P. Russell of Toronto. The late Dean Grasset, of Toronto, was a pupil of my time, but he left medicine for the church.

* * * * * * * * * *

Moses Sylvester was born in Vermont, but in a moment of devotion—to his own interests—he crossed the line and settled in one of the Eastern townships. He had been brought up on a farm, had no medical education or qualification whatever, very little education indeed of any kind; but he undauntedly hung out his shingle and practiced medicine for years, earning a reputation for possessing "experience" and "common sense!"

But a time came when he thought it would be wise to get a Provincial license, so in the winter of 1839 he came to Quebec and interviewed Doctor James Douglas. "Would the Doctor teach him anatomy? He was willing to pay—what was right. He had tried to do something quietly at home, but the risk was too great, and he had no anatomical books." The Doctor kindly said to him: "Oh, dear, no. I have no time for anything like that. I have a dissecting-room in the house, for the benefit of my students, and I look in every day; but Mr. W—— or Mr. R——, my two seniors, will tell you everything you want to know, as well as I can. You are welcome to 'subjects,' books, instruments, everything in the room, so go to work as soon as you like."

Then and there Moses Sylvester became one of our "happy family." He was dressed in a beautiful suit of new clothes, Oxford mixture, made by the fashionable village tailor, with the inevitable Yankee adornment of that time—a black satin waistcoat—black silk stock, and collars so dangerously high that they threatened continually to cut off one or other of his ears. He wore "Wellington" boots, and leather overshoes with brass buckles—and he carried a small comb in one of his pockets.

After expressing our admiration for his clothes, finding out their original cost, the address of his tailor, and other useful information, we gave him a pattern of an "overall garment" to wear in the room, and when he made his first appearance in it he was simply perfect. We had advised "frills" on the collar and cuffs, but that part his dressmaker left out.

Then we all took him tenderly in hand, and in a short time taught him more anatomy than was to be found in any "*Dublin Dissector*" or *other book of instruction!* In time we got used to each other, and Moses—in spite of our assistance—made brilliant progress. Time, to him, meant money! One day he came in with a troubled look on his face. "The exams" would be on soon, some kind friend had told him, and he must brush up on the brain. He had never seen one, except a sheep's brain, and if the examiners should be too inquisitive on that subject it would "be all up with him," he was sure of it. Privately, and after the lapse of so many years, I may put on record my opinion that Moses Sylvester knew then as much about the human brain as the Medical Board did; but there was a certain routine of questions to be asked—and answered—anyway!

A brain, to be of any use, must be had fresh. We knew nothing then of the "hardening process" by which one could be kept for years, but which, by the way, is useful only to dead brains—living ones being hardened by an entirely different process, just as hearts are hardened. To quiet Moses, we promised to get him a brain. "Oh! if you will, I will pay anything." "Look here, old man," we said, "we are not trading in brains, but simply for the credit of the room we want to put you through." "But can't I go with you? Can't I do something?" "No, thanks; two are enough—a third man would only be in the way."

This was about the middle of April—nearly time to close up—so there was no time to lose. A patient had died that morning in one of the hospitals—the very thing we wanted. I interviewed some men of the French school, and asked if they wanted the body. "No, we want *part of one—we want a thorax.*" "All right, *we want a head. You get the subject and give us the head*, or *we will get the subject and give you the thorax.*" "No, it is the last of the season. We want a good time, and will go with you. We would like to see 'votre façon.'" There was no use in talking about it, so I said: "I'm going to-night—*au revoir.*" Attached to the Hôtel Dieu was a small cemetery, in which was a vault ten or twelve feet square and sunk into the ground to the depth of about eight

feet. The top was covered with planking; a trap-door was in the centre, fastened with a lock and key, and a light ladder led to its depths. This vault was used only in winter, and its contents—*then principally coffins*—were removed in the spring. I never was in it before, or since, but it had been frequently raided by the Opposition and was watched. The last time I was in Quebec the site was covered with streets and beautiful dwelling-houses. I slept in one of these houses one night; and in the morning, on looking out of the window, could not see one thing to remind me of the eventful night of so many years before!

The self-constituted "guardians of the night" were a grocer-man, on one corner, and a dry-goods man on the other, and they used a shed in common for stowing away old packing-cases, and this shed was built up against the rear wall of the cemetery. I made a "reconnaissance" during the day. It was the loveliest place in the world to enter by; nothing to do but step over the low stone wall from the "grocer-man's" shed; but it had its disadvantages—it was right in the heart of the city, and it was the loveliest spot also for an ambush by the enemy.

Bob and I were over the wall, and into the vault in a minute, pulled down the lid, lighted an end of wax candle stuck in a slice of potato for a candlestick, got what we wanted—a head—and left everything as before, in three minutes. Just as I lifted the trap-door, at the top of the ladder—my trophy under my arm—there was the sharp report of a gun, and a cry *from below* of "Are you hurt, Ned?" There in front of me, standing at an open window, in a well lighted room, in the second story of the dry-goods man's shop, stood the dry-goods man himself—in the act of bringing his gun from the shoulder. The distance could not have been over thirty yards—which was poor shooting, but I will do the shooter the justice to say that he knocked splinters out of the trap-door! When Bob came up we dropped the trap-door and retired. Bob wanted to stop—and ascertain the exact amount of injury to the trap-door—but as my ribs were not included in the splintering, I had no curiosity in that direction, just then; we could come back some other time, in daylight, if necessary! Being always great in strategy—particularly in retreat—I grasped the situation at once. To retire as we had entered would be to throw ourselves into the hands of the enemy; so we went straight for the opposite wall, which was a high one. By the aid of some picket fencings around graves, which stood conveniently close to the wall, we got over, and dropped into the back yard of a private house. My first feeling was one of intense relief that there were no bull-dogs in that yard. I never had a special fondness for dogs smelling round my legs, on strange premises. The house in front of us was well lighted. The cook stood at the kitchen table, evidently getting up the dinner. Without hesitation I entered—Bob pulling at my coat-tail to know what I was about. Said I to the cook, "Oh! is the master upstairs?" "Yes," she replied, "they are all at dinner." "Indeed—then we will go up." She never screamed—she hadn't time to. She rather looked as if it must be some joke; so I said again, "Don't mind, we'll go up;" and up we went, into a well lighted hall, and straight in front of us was the front door. Not even a child did we see, but, as we passed on our way to the front door, a door on our right was slightly ajar, and we heard the clatter of knives and forks and the sound of merry laughter. We did not stay! The cook was following us up, calling out, evidently awake at last to the situation, but the noise inside prevented her being heard. Out into the street we walked, ran round the next corner, and then walked quickly back to the welcome of our friend Moses, getting in exactly at gun-fire (9 o'clock), and presented him with what had so nearly proved fatal to one of us.

Moses was delighted with the sight, and passed the Board with flying colors.

Walking so impudently through a strange house was an irregular proceeding, but if the worst had come to the worst we would have thrown ourselves on the protection of the gentleman of the house—safer with him than with the man who had just fired at us, or with the grocer-man at the corner.

As it was, although I did not know it at the time, the occupant of the house was the organist of the English Cathedral, and I used to sing in his "surpliced choir" on Sundays! Our escape was evidently owing to that fact!

For the grocer-man or the dry-goods man to have followed in the line of the street would have involved a detour of nearly half a mile.

Our first duty now was to find out the gentlemen of the French room. One of them was a pupil of that most courteous and gentlemanly of physicians, Doctor Charles J. F——t, but he knew nothing of their whereabouts. He sent out, however; and we hunted everywhere, unsuccessfully, and at last had to let things take their course.

About 2 o'clock in the morning a dozen young gentlemen marched in line down St. Johns street, passed the cemetery and into Palace street, singing, making the detour two or three times; then, leaving three of their number outside as a "corps d'observation," they boldly entered the grocer-man's yard, passed over the low wall into the cemetery, and took possession of the vault "*en masse*." It was a lovely April night, and the "stars above were brightly shining" at the moment—"they had nothing else to do." They —I don't mean the stars—had been having a good time in one or more of the "salons" in the Faubourgs, and were glad of a chance to sit down, so down they sat—on the coffins! There was nothing else to sit upon – not even an arm-chair or an old sofa. Then they lighted up and had a jolly good smoke, followed by a festive "chauson" with chorus—in the middle of which a persuasive voice from above echoed into the tomb below, as the trap-door was raised: "*Montes, messieures*" —"Come up, gentilmans"—and they came up! It was a rude interruption to the hilarity of the meeting, but night-watchmen are not famed for a fine sense of feeling.

As they came up out of the vault they were handcuffed, two by two—Noah's animals entered the Ark in the same order, except that they were not handcuffed—and marched through the grocer-man's yard into the street, feeling very much as Adam and Eve did when they were "served with an eviction" from Paradise. Then the "corps d'observation" put in an appearance, and one of them—a big, overgrown baby, with a high-sounding patronymic—the son of an honorable legislative councillor, said to the officer in charge: "What do you mean, Sare? These are my friends! Liberate them instantly, or I—I—will tell my father!" To which the Chief replied: "Here, Tom, put the bracelets on him." Handcuffed he was in a moment, and marched off with the others to the police office in the Jesuits Barracks. Next morning at ten they were escorted in state to the court house and tried.

When we were seen to leave—apparently empty-handed—it was thought we would return later; accordingly policemen were placed as a watch in the dry-goods man's upper room and in the grocer-man's shed. After a weary waiting the second army of students were seen to enter; so, giving them time—as they thought—to begin operations, the policemen marched to the door of the vault and ordered them up, one at a time! Strange to say, they had not disturbed anything, and were discharged—with a reprimand. During the day I called in one of the party, and taking him upstairs said, "Did you ever see that face before?" He was astounded. "When did you get that?" "Oh, we went at eight in the evening—you went at two in the morning!"

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Before closing this paper I must relate something that occurred in the winter of 1833. One morning there was found on the ice in front of the city, a young negro, frozen to death. He had probably been a sailor, had deserted, and been left friendless at the close of navigation. An informal inquest was held by M. Panet, the coroner, and the expense of a funeral was saved to the country by making a present of the body to our room. It was brought there at once, wrapped in an old piece of sail-cloth. No one knew how long the body had been exposed. Nothing more than I have related was known. As the body was much emaciated, it was suggested that it would make a splendid blood-vessel preparation, so steps were taken accordingly.

In making blood-vessel preparations the arteries had to be injected with red wax, and the veins with blue; and to prevent the wax from cooling in transit, the body must be thoroughly warmed—in a warm bath.

The negro stood upright in a corner of the room until the bath was ready and the water of the proper temperature. I put him in the

bath myself, and weighted the body down firmly to keep it under the surface. I had to leave the face and mouth not completely submerged, owing to the rigid state of the body. In about an hour I went up-stairs to see about the fire, and found everything all right. After two hours more I went up again, and when I opened the door I started back in horror at the sight—horrid it was beyond description. The man was partially sitting up in the bath, his head and shoulders completely out of the water, his arms to above the elbows out over the sides of the bath as if he were trying to lift himself out, his eye-balls almost protruded from their sockets, and the expression on his face terrible —terrible in the extreme.

I went down-stairs and asked the doctor to come up; and when I saw how *his face blanched* when he saw the horrid thing, it was a comfort to me to know that I was not the only frightened man in the world!

What was it? Was it all owing to a rapid process of decomposition, generating gases in the abdomen, and floating the body up, in spite of what had been weighting it down? That would not account for the arms being thrown out over the sides of the bath, or for the terror-stricken expression! After carefully considering everything, the doctor could only come to the conclusion that there might have been partial resuscitation, which, owing to causes not easy to explain, was not completed.

Perhaps! only perhaps! However, if anyone had been in the room, the end might have been different. Who knows?

There is no doubt that in some of the lower forms of life the "divine spark" may be retained, and restored, after being exposed to the most intense cold. For instance, some fishes, after having been frozen solid for hours, will, on being put into water, return to vigorous life. But I never heard that the negro possessed a greater privilege in this respect than the white man.

At any rate the thing was too terrible to keep in the house; so, after assuring ourselves that he was actually dead this time, we rolled him up again in his old sail-cloth, and that evening he was summarily disposed of.

Sherbrooke, P. Q.

CLINICAL EXPERIENCE IN THE TREATMENT OF NEUROSES OF THE HEART AND STOMACH.*

BY FRANK P. NORBURY, M.D.

In the study of the neuroses during the past ten years, especially of the heart and stomach, internal medicine has made advances worthy of the progressive clinician's attention.

It was but a few years ago that dyspepsia covered many mistakes of the analytical diagnosis of diseases of the stomach, and "heart disease" was the sentence imposed upon that neurotic, overworked individual laboring under adverse conditions of disturbed circulation of sympathetic or ganglionic origin. Even now, such a diagnosis is too often reverted to, and these unstable, unmeaning terms are still words in our vocabulary, for the want of more scientific expressions covering the pathologic conditions under consideration.

In a clinical experience with nearly twenty-five hundred new cases of mental and nervous disease, I have been struck with the profound functional alterations encountered in the circulatory apparatus and digestive tract. As these are often coincident, being correlated, having one morbid entity as their fountain-head, it is well to consider this entity before considering the respective peculiarities of each class of diseases. The biologic law of nerve mechanism underlying all nerve phenomena resolves itself briefly into the following: The animal organism is regarded as a mechanism which is stimulated to action by its environments and in turn acts upon the latter. Physiologists know and regard every action as due to some definite cause or stimulus and as dependent on structural conditions. For each activity, therefore, there is, somewhere in our organism, elementary parts of structure on which it is dependent.

We have to assume many of these localities, especially in mental mechanism. The nervous mechanism is made of minor mechanisms, such as peripheral and central elements, of coördinate ganglia, nerve fibres, and nerve endings. Each is independent and yet dependent on its fellow mechanisms; independ-

* Read before the Tri-State Medical Society at Kansas City, Mo., April 4th, 1894.

ent in many functional activities, some of which have defined localities in the cerebral cortex—the remaining minor mechanisms are definable. Again, all nerve action is dependent on the adequate rest and nutrition of the tissues generating or transmitting nerve impulses for normal action.

The latest researches in nerve pa hology have demonstrated these facts, and it is upon these essential considerations that the treatment of the neuroses depends. Now a neurosis is merely impaired functional activity, and there are many forms and degrees of functional impairment. We may have a genera! impairment, in which case we say that our patient is a neurasthenic, or is suffering from nervous exhaustion; or we may have a purely local exhaustion, in which case we have a neurosis. The pathological basis being the amount of exhaustion, waste of or perverted nervous energy, this is the morbid entity. It is important for us to grasp this principle in considering the neuroses of special organs: fatigue when normal is a rapidly recoverable exhaustion, fatigue when abnormal may be prolonged into neurasthenia.

Again, the effete products of the metabolic changes going on in the body may so accumulate as to produce an auto-intoxication in certain portions of the central nervous system, says Konalewsky, and we have disturbance of nutrition result. I cannot here go into detail regarding the chemic explanation of the neuroses, for want of time; suffice it to say that the question of auto-intoxication has been demonstrated to be the foundation of much of the phenomena evident in the neuroses.

Over-exertion, over-work, malnutrition and prolonged mental strain are capable of producing the foundation for a more or less prolonged neurosis.

It is true, heredity may be a factor, for we are all subject to this inevitable law, and much physical impairment is due to that transmissible something which determines that like shall produce like—that the neurosis of the parent shall be found in the child, or that, through the law of the interchangeableness of the neuroses, some other form of functional nerve-impairment be found in the offspring. All degeneration finds its beginning in altered nutrition, which may, or may not, be rapid in the alterations of nerve phenomena.

Again, reflex action underlies certain forms of the neurotic manifestations in disturbed condition of the stomach and heart. The reflex cardialgias and dyspepsias belong to this form.

I shall not enter into any classification of the various neuroses, except to say that Leube's classification of neuroses of the stomach has been followed in describing the few cases mentioned, and Brunton in heart neuroses.

We must bear in mind what Ewald has said, that neuroses rarely occur singly, but usually in groups, following one another during the course of the malady like a panorama of ever changing scenes. The symptoms are sometimes obscure, but usually well defined, and will be spoken of in special cases.

The treatment is to be considered specially, and again let us remember "the main object of treatment is to cure the primary affection and is not to be directed to single symptoms, however prominent." My clinical experience has been largely with the mixed form of nervous dyspepsia, of which the following case is an illustration:

J. H. T——, æt. 26, mail-carrier, single, poorly nourished; complained of pain in region of stomach, nausea, headache, constipation, loss of appetite. Mental symptoms: introspection, tendency to depression and melancholy, especially when stomach was empty. The local sensations were more aggravated after digestion. He was overworked. There was profound disturbance of innervation; nutrition was suffering; the hyperacidity was intense; the "feeling of goneness," which so expressively describes inhibited sympathetic action of the solar plexus, was present. Upon the whole, here was represented a characteristic nervous dyspeptic. Treatment: Restricted diet, avoiding starchy foods; meats recommended. Enough sodium bromide to relieve the distress of aggravated sympathetic disturbance; as an adjuvant the application of the galvanic current, central galvanization, commencing with three milliamperes, increasing to five milliamperes. For the correction of digestion, elixir pepsin with bismuth. For the constipation, extract of buckthorn bark and fluid hydrastis.

Let me here say that I regard, in all

neurasthenics with constipation, the use of *Rhamnus frangula* superior to *Rhamnus purshiana*, because of its alterative action and gradual improvement of peristaltic tone.

Now for the building-up process, to insure repair of nutritional needs. I have always relied upon strychnine in some form—I prefer and generally use the nitrate. Some four years ago I had Parke, Davis & Company make for me hypodermic tablets for use in such cases, particularly upon the insane, and have been highly gratified with the results. I now use the tablet triturate, excepting, as I say, upon the insane.

The patient before mentioned recovered and has done nicely, but it required seven months to establish the reparative process fully.

Observation of numerous such cases, of which this is an illustration, has confirmed, I believe, the wisdom of the combination of nerve sedatives and tonics with alteratives.

By the way, women are especially prone to such attacks. I have noticed the most profound nutritional disturbances following neurasthenic states of the stomach, and resulting in insanity; hallucinations would be the outcome of the sympathetic affection, and forced feeding be necessary. Death has resulted in some cases. Exhaustion in acute mania is attended with profound disturbances of digestion; general paralytics and epileptics are also subject to this same line of phenomena. The re-establishment of functional activity is what we aim for in such cases, and forced feeding with predigested or easily assimilated foods, malted milk, etc., is useful.

There is often encountered a class of neurasthenics having reflex stomach symptoms which, for the time being, lead to difficulty in diagnosis. I refer to sexual neurasthenics, where impotency, loss of virility, etc., are pronounced; and in most all such cases nutrition suffers as well. Constipation and sympathetic stomach symptoms are present. In fact, my experience leads me to believe that all such cases have more or less digestive symptoms. A great many cases of indigestion, dyspepsia, and hyperacidity, if examined closely, will show that somewhere there is a leak of nervous energy. It may be sexual excess; it may be business worry, anxiety, hard mental work, as in the case of a college professor whom I recently saw, who is in the depths of authorship of a Greek text-book; it may be rapid child-bearing; it may be pelvic disease; it may be any or all of the local or general neurasthenic states.

An examination of the urine and fæces will show evidences of defective metabolism—the conditions vary considerably. The fæces contain an excess of urobilin; the urine is concentrated and of small amount—600 to 1000 Cc. in twenty-four hours; there may be an excessive excretion of phosphoric acid and a change in the quantitative relation of urea and uric acid. In health this relationship of uric acid to urea is one to 45 and one to 60; in neurasthenia one to 40 to one to 30. The presence of excessive uric acid is to be noticed in many cases. When such cases exist it seems to me that we have more vasomotor disturbances both of the stomach and general system. Correction of this condition will often alone effect a cure of the local neurasthenia.

In those cases of hyperæsthesia of the stomach where the slightest irritation produces pain, and the patient is ever conscious that he has a stomach, cocaine will give valuable help. It should be given preferably without the patient's knowledge. Galvanism, applied centrally, will do much to overcome pain and distress, and in cases where there is flatulency, nausea, and aversion to food it will improve the tone of the stomach, give improved circulation, etc. Rest is imperative in most all cases of neurasthenic states, but not cessation from all duty; rather a little hard work than a chance for self-absorption. Change of scene, out-door exercise, cheerful surroundings, will do much to overcome chronic invalidism.

Much that has been said in regard to the stomach neuroses applies to the heart as well, for in both the nervous mechanism is primarily affected; the heart and stomach being secondary. The heart symptoms are functional and not due to valvular or muscular trouble. We have the irritable heart without intermitting pulse, the irritable heart with irregular beat, and the irritable heart due to brain or medullary affection. Herewith I present a case of neurosis of the heart:

R. M——, lawyer; office practice; hard worked; little rest; sedentary life. History

dated back nine years. Heart irregular, but with no evidence of organic affection. I attributed the collapse to strain and over-work. Pulse 120, being maintained most of the time. Headache, constipation, digestive disturbance. No sexual excess, no bladder or kidney trouble. He was rapidly becoming a general neurasthenic, and all from the failure to stop the leak. Had peculiar sympathetic pains, anæsthetic states, etc., which would lead to hysterical belief.—It is, I consider, difficult to differentiate hysteria from neurasthenia, in advanced stages. Galvanization was resorted to in this case, with an occasional general faradization. Strychnine soon righted the pulse. Alterative tonics, excess of feeding, and attention to exercise, were part of the treatment.

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Since the foregoing was written I observed in the April number of the *American Journal of Medical Sciences* an intensely interesting and scientific paper by DaCosta, in which he deals with this class of neuroses. Neurasthenic heart affection he calls Cardiac Asthenia. I beg leave to quote his description of the symptoms and points in physical diagnosis and treatment:

This heart feebleness or heart exhaustion comes from two causes: it is due either to nervous failure or to weak heart-muscle, in some instances to a combination of both. Cases of essential weak heart from nervous causes are manifested in those whose nervous system has been strained or overworked. It is frequently shown in collapse; the patient is obliged to remain in bed; swooning and fainting may be noticed on attempting to rise. The heart's action is feeble, pulse compressible and generally increased in frequency; there is a sense of uneasiness in the cardiac region; no pain; extremities are cold, skin pale, capillary circulation poor; sweating is exceptional; the appetite is poor; no marked gastric symptoms; constipation prevails. Insomnia may be complained of. Apprehension and low spirits are very common. Patient rallies slowly, one or two months being required before he can sit up; months elapse before he recovers. The course of the disease is markedly chronic. The physical signs are very significant. There is no increased percussion dullness; the impulse is feeble, difficult to find, not diffused. The first sound is short, lacking in volume, and may be obscure or short and valvular; the second is not accentuated. Excluding anæmic murmurs, which are very infrequent, since anæmia does not play an important part in the affection, we may have, though this is also rare, functional apex murmurs of dynamic origin, and these murmurs may be brought out by suddenly closing the hand tightly. A sensitiveness to touch in the cardiac region is at times noticed.

The disturbance is primarily in the nervous system and not in the heart. The cardiac malady is throughout neurosal rather than muscular. He considers the cardiac disturbances due to cardiac-ganglia involvement and to disordered inhibitory influence in the ganglia—the changed respiration being against the medulla being affected. He says the diagnosis is not as a rule difficult. Sudden onset, unembarrassed breathing, feebleness of pulse and cardiac impulse, are full of significance.

Jacksonville, Illinois.

"PÆDIATRIC MEDICATION."*

BY J. B. CASEBEER, M.D.

Many of the most successful practitioners have made signal failures when called upon to exhibit their skill in the treatment of patients of tender years. I have often been pained by the indifference manifested, the slight degree of importance attached to maladies afflicting children, and such remarks as: "Well, you may give a few drops of paregoric, some catnep tea, or most anything of that kind you may find convenient, as we cannot do much for children so young;" "You mothers or old women can treat young children as well as I or any physician can;" or, "I don't like to treat children, it is so unsatisfactory—they cannot tell how they feel and what is the matter with them, and I never can tell what they need."

Such remarks (and the foregoing are but few specimens of those altogether too current in our ranks) indicate a lack of knowledge or a misconception of the true principles of practice of medicine as applied to childhood—a lack which certainly challenges our sincere attention. It is a loud cry for reform or re-education.

To my mind the diseases of children speak

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as plain a language, require as direct remedies, and are as emphatic in their demands as are those of the adult; and when we admit that untutored women or good nurses can judge of the requirements of infancy, and can treat them as well as the educated physician, then I feel that we ought to be honest enough to admit that they are equally able to treat the ill of all classes and ages. Paregoric, rhubarb and chamomile are appropriate remedies on occasion, but are certainly very much out of place when not employed to meet some definite indication. The natural language of the child is the true and unvarnished expression of facts, while that of the adult is tainted by the prejudice of opinion, freighted with the imperfect use of an imperfect language to express imperfect thoughts; moreover, the statements of the adult must often be taken with a great deal of allowance, and many of them entirely excluded when summing up for diagnosis. If the intelligent physician will but open both eyes and ears, his little patient will unconsciously tell him how he feels and what is the deviation from the health standard; and then if he will but study cause and effect he will find the indications for treatment just as plainly marked as in older patients, who are, perhaps, only too fluent in reciting their pains and aches.

The medical man practicing rational therapeutics, who is governed in treatment by the indication of each individual case, and who strives to meet only the indications existing, needs but to be versed in the laws and natural language of disease, the laws and standard of health, the true nature and effect of the remedies used, both physiological and toxic; and if he can read these correctly and apply them with judgment, it matters not whether he find his patient in Maine, Texas, Indiana, or California—the same symptoms call for the same remedies, and in the different ages of the patient the same language is to be read.

While the above is true, I also believe that the converse is only partially true. One may in treatment of the vigorous adult fail to skillfully meet the leading indications with their appropriate remedies, yet, if not too excessive in the use of misapplied remedies, the patient when possessed of strong vitality may get well in spite of all. But in the tender system of the infantile patient a misplaced remedy may easily tend toward fatal consequences. One is, therefore, forced to the conclusion that suffering infancy and childhood should be relegated to the care of only the best physicians, and if uneducated grannies and nurses are to be supplied with employment merely because of their kindness of heart and faithful nursing, or even for their experimental knowledge, then let them confine their ministrations to adults, where neglect and misapplied energy and remedies are less apt to be pernicious.

Let no true physician flatter himself with the thought, much less say, he can do his whole duty to an adult patient but cannot successfully treat the children, for it is only the siren song of a false and distorted conception of his profession and of himself.

The text-books on the practice of medicine which are employed in the college curriculum, and which find place in libraries, deal with disease as observed among adults; then we have works on diseases of children and their treatment, written usually by other authors, who describe maladies so differently and have such different views and modes of management that the student at once infers that the diseases of adults and the diseases of children must be entirely different, especially as at college the teaching concerning the latter is relegated to a special "chair," or perhaps to the instructor in gynæcology or obstetrics. The medical tyro is perforce led to study from two different standpoints, and his understanding is consequently warped and prejudiced at the very outset; this complicates his labors, retards progress, and he is led to feel that to be an adept in the one, he must necessarily be a failure in the other.

I ask in all reason and in all common sense if we, as a profession, are not somewhat at fault in failing to teach the true similarity of diseases of all classes, thus mystifying what should be made plain to the untutored but anxious and earnest student.

The same cause, as sudden change of temperature, under similar conditions of perspiration, or the inhalation of cold air in conditions of prostration or over-exertion, may, in the child as in the adult, produce a

congestion of the lungs—may result in pneumonitis or bronchitis. In either case there is local hyperæmia, a chill followed by febrile excitement more or less intense, and if the sensitive pleura is involved there will be pain in proportion to the degree, and *alike in both.*

Then the indications for treatment are certainly alike, viz., to control the pain, allay the fever, and overcome local congestions. We meet the first with aconite and bryonia, especially if the pain is made more severe by breathing or coughing or any movement of chest, with a tendency to perspiration; or if the pain is sharp or lancinating, with hot, dry skin, asclepias will be the more appropriate remedy.

We meet the second indication, if there is a full bounding pulse, by means of veratrum viride; if, on the contrary, the pulse is small, quick and threadlike, aconite has the preference; or if sharp, the patient restless with sudden startlings in sleep (and in the child we get the shrill cry, and especially if there are papillæ on the tongue), we use rhus toxicodendron. If the secretions of the mucous membrane, and especially of the bronchial tubes, are insufficient, resort is had to ipecac; but if too profuse and there is much rattling, lobelia is added. Experience declares that we can always correct these special symptoms with special remedies, if the latter are properly applied.

The third indication demands local applications, such as counter-irritants, thus bringing to the surface the surplus blood; or the application of sufficient heat to cause the contraction of the over-distended blood-vessels, thus enabling them to unload by forwarding the over-supply, assisted by some agent to induce capillary contraction such as ergot, Calabar bean, or, better still in proper doses, belladonna. These remedies are alike appropriate in all ages; but opium is seldom if ever advisable to administer to a child, and I think generally of doubtful influence in the adult.

By observing the above rules in the early stages of the various forms of pleuritis and pneumonitis, I believe these maladies can be successfully aborted in the majority of cases. I will say more! If they will abort one, they will also abort the other under similar circumstances; and if the same symptoms exist and are met by the same skillful application of appropriate remedies, in proper strength and quantity and at the proper time, success will always crown our efforts. This will hold true, no matter what is the patient's name, in what State she or he may live, or of *what age.* The real skill in the treatment of any patient is in reading the exact language of disease by the existing indications, and then meeting with exactly the right remedy in the right doses; and the latter often requires greater skill than all else beside.

Or take, if you please, any of the other numerous inflammations or diseases which attack all ages of the human family, and the symptoms will be manifestly the same; and as similar indications are met with similar remedies under similar circumstances, we are forcibly impressed with the similarity of treatment which is indicated in all ages. One does not require the age of the patient for the purpose of deciding *what* to give, so much as to decide *how much* to give!

Indigestion in all ages must alike be met with the same skill in regulating the quantity and quality of appropriate food, with the aid of such digestors as will assist the truant stomach to do its whole duty.

In surgery, dislocations are to be similarly diagnosed and reduced. Fractures also must be similarly placed in apposition and held with their appropriate dressings, regardless of the age of the patient.

The infectious and contagious diseases are similarly manifested in the different ages of life, and I think no one would argue that the same rules for prevention and treatment should not prevail with children as with adults. Of course we must bear in mind that the nerve centres are more easily influenced, either for good or evil, by disease or medicine, since they are less mature, in the child; but this will not so much guide in selecting the remedy as in the manner and power of application. I believe when we entirely rid ourselves, as a profession, of that old and justly condemned habit of treating diseases by name alone, and instead permit the pathological indications to suggest the remedy, then and then only will we have arrived at the proper point and thus have

dropped a large section of worse than useless treatment; and in those of tender age we cannot afford to use any unnecessary remedies lest they prove detrimental to the best interest of the little patients. One step in the right direction is not sufficient when more are required (as is certainly the case in pædiatric medicine), for when we succeed in throwing overboard all that is unnecessary and uncalled-for, then it is of the utmost importance that what remains should receive careful attention and not only be of the purest quality but be made as pleasant and acceptable as possible.

I am free to admit that I long taxed my wits most severely in endeavors to render medicines pleasant; I studied to season skillfully (as the good cook would do) by using syrups, peppermint, cinnamon, wintergreen, ginger, brandy, whiskey, wine, etc., but invariably could meet the requirements of odor far better than of taste; and sometimes was forced to take comfort in the old aphorism so frequently quoted for the especial cheer and comfort of the patient, that if the remedy did not "taste bad" it would "do no good."

I cannot now stop to detail the anxious hours and earnest study given to the problem of making drugs more agreeable to taste and stomach, but am glad to say that latterly pharmacy has achieved no little success in this direction. We now ask the druggist for pure, fresh remedies free from worthless gums, resins, and dirty sediments, and we get them. We can now dispense in pure water so that a teaspoon will contain the desired dose; and this method is rather grateful than otherwise to patients, whether large or small. This enables us to better practice the theory recently advanced by Professor Smith, of New York City, and many others, viz.: "It is more desirable, safer, and a happier effect is secured, if remedies are exhibited in small doses frequently repeated, than in large doses at longer intervals,"—a theory the writer is delighted to endorse, and to practice.

If we desire a change of menstruum, distilled glycerin may be employed; and when it will do no harm and is desirable for taste, *pure white sugar* or mint-water may be preferred. And thus medical men may sustain more amicable relations with the community and especially with children. In this way the latter are not so offended with nauseous doses forced down their unwilling little throats; their stomachs are not so painfully bloated with fermenting syrups, and the consequent colics are not keeping up a constant uproar with nurses and parents; finally, the patients can the better be kept sweet-tempered and quiet, and the medical man permitted to enjoy his rest until morning, which sometimes materially enhances the pleasantness of his own temper the next day.

Let no physician imagine for a moment he will have to wait for needed reforms among the children until they are several months old, for there is great need at their first reception into the world, even at their first ablution; and certainly great reform is demanded in their early and continued dressing for many months. During the first bath, as usually given, and the subsequent dressing with improper clothing, improperly made of improper material, many an otherwise healthy babe is not only seriously shocked, but has implanted in its tender nature seeds which develop into an *unhealthy organism* or an *early death.*

And now in conclusion let me ask the fellow-laborers in our beloved profession, in the interest of honor and usefulness, in the interest of the dear children we are so frequently called to administer unto, in the interest of the anxious and earnest student seeking to know the geography of the whole field of medicine,—in the interest of all these, let us endeavor to appreciate and teach the true relations existing between the child and the adult, the sprout and the full-grown tree, and forever divorce pædiatrics from the unnatural relations heretofore forcibly maintained with gynæcology and obstetrics; and let us, moreover, awake to realization of the fact that there is more real science in the proper practice of medicine among the children, where is read the natural expression and influence of disease by physical signs and rational symptoms unaided by verbal language, and also that the treatment of children calls for the best efforts of the most scientific and skillful, and that any indifference or inclination to shift responsibility is only an evidence of our weakness in this direction and of non-appreciation of, and unwillingness to perform, our whole duty.

Auburn, Indiana.

DIET OF THE NATIONAL GUARD AT SUMMER ENCAMPMENTS.

BY CHARLES WILLIAM GALLOUPE.*

The most arduous duty required of the surgeon of the National Guard in time of peace is the supervision of the hygiene of the summer encampment, together with the care of those actually sick or injured. Whatever concerns this duty must therefore be a matter of interest to us, whether we are enrolled in the body of conscientious servants of the State, or whether our object is to reduce the position of the militia surgeon to a sinecure and secure for ourselves the pleasures of a week's picnic at the expense of our awe-struck fellow-taxpayers. In either case it is for our interest to reduce the size of the sick-list, and keep the men active in the discharge of the duties of the citizen soldier.

In Massachusetts no man can be excused from duty at the summer encampment for sickness, except on the certificate of a competent medical man; and, on the other hand, if any question arises in the mind of the captain as to the ability of any of his men to perform their full duty, it is the custom to ask the advice of the surgeon of the command. Furthermore, as a merciful man is merciful to his beast, every horse that goes to camp has his three-minute kick against the rectal thermometer. By this means the material placed in our hands is warranted sound in wind and limb. With such a promising outfit, what actually happens?

An experience of six years has shown me that within forty-eight hours of their proud entry upon the field, five to ten per cent. of the men are *hors du combat*, and the enemy that has accomplished this decimation is acute indigestion. To be sure, some have succumbed to enforced insomnia, some to the serious casualties of foot-ball, some to the unaccustomed fatigue of military duties, and perhaps, in rare instances, the cup that cheers has marked for its victim the all-too-enthusiastic recruit. But the morning sick report runs, as a rule, on the brief gamut of cramps, vomiting, diarrhœa, constipation, headache; for all of which the sovereign remedy in the soldier's mind is that time-honored blue and white paper parcel, variously asked for as "seedless," "settler's," and "settlin's" powder--the very name of "settling powder" acting almost as a charm on the outraged organs of digestion.

Many causes predispose to dyspepsia, such as the unusual fatigue of drill and guard duty in men of sedentary occupations; the loss of sleep from the novelty of their surroundings, from unaccustomed noise, from the glare of the morning sun on the tents, and also from the inopportune visits of self-invited comrades. But the chief cause of acute attacks of indigestion is the change from simple and regular meals to a mixed and injudicious bill of fare, supplemented by fruits and constant potations of lemonade and other so-called "soft drinks," with an occasional addition of liquors of a harder sort. Under the system that obtains in Massachusetts, the companies cater for themselves independently, each having its own cook-house and mess-tent, paying for its meals out of the company fund at a usual rate of $1.50 per diem. The inclination of the men leads them to demand as elaborate a *menu* as the treasury will allow, including such indigestibles as pie and lobster salad in the companies that boast a large exchequer, while the more economical can reach the same haven of dyspepsia through the more humble means of fried steak and pork.

The inspection of food from a hygienic standpoint has never yet been asked for by the State authorities, although the custom that obtains in the navy—the official sampling of each dish before it appears on the table—is well known and approved. Under the present system of company catering, the testing of each dish by a medical officer would be impossible on account of the time and labor required, and the necessary discrimination against inefficient cooks would lead to endless disputes, and perhaps to more "heart-burnings" than the offending food itself. Submitting the bill of fare for each day to the criticism of the medical officer would insure the exclusion of notoriously offending articles, but would not serve as a bar to poorly cooked food, nor to meats improperly cut, or tainted and spoiled. An inspection of the food as it goes on the table is the only means of securing the good and

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excluding the bad. The caterers certainly deserve a charitable word, inasmuch as expert cooks may fail in the first few days of experimentation in out-door cooking in temporary shanties, with stoves that are minus an efficient flue, and with absence of all accustomed conveniences for storing the food and fuel; while, at the same time, there is the exceptional task of serving a large number of hungry and impatient men with hot and palatable food in the open air.

Some of the evils of company messing could be obviated by placing the contract for feeding an entire regiment in the hands of one caterer. This would secure a uniform bill of fare for all, and would allow the medical officer to select and arrange the articles from a hygienic standpoint; but no conscientious endorsement of the actual meals could be given without a personal sampling three times a day of the products of fourteen separate cook-houses—an ordeal before which the stoutest medical heart would quail. This experiment was tried, however, by my advice, in the Eighth Regiment Massachusetts V.M. at its summer encampment of July, 1892. The contract for feeding the entire command of about six hundred men, together with invited guests, was awarded to a single caterer, at a fixed price of fifty cents per meal, and the bills of fare for the fifteen meals (Monday to Saturday) were selected by the caterer and myself in consultation. They read as follows:

Breakfast: Hot bread (biscuit or corn-cakes); potatoes (baked, Lyonaise, stewed, or hashed and browned); eggs (boiled and fried); and one form of hot meat—either broiled beefsteak, mutton-chops, or meat-hash. Coffee.

Dinner: Soup; meat (beef, mutton, fowl, or chicken), with occasionally a fish course; potatoes, with one or two additional vegetables. A dessert of some simple pudding (like tapioca, bread, or custard), or ice-cream and cake. Fruits (watermelons, oranges, bananas). Coffee.

Supper: Hot bread (tea biscuits or muffins); cold meats; one hot dish (such as hash, baked beans, omelettes, bluefish or mackerel); a simple preserve or fresh berries; coffee, tea, cocoa.

At all meals cold bread, butter, and milk in unlimited quantities.

Such *menus* ought to be satisfactory, but the soldier's inalienable right to "kick" was not to be evaded so easily. My method of inspection was to visit each mess-tent (fourteen in number, one for each of the twelve companies, one for band and field music, and one for headquarters) as soon as the men were seated, and examine the food and listen to their complaints. This was no sinecure. In general, the article most condemned was the meat, on account of unpalatable cooking or a scantiness of the best cuts. These criticisms were, I am forced to admit, well founded, and it was no balm to the wounded feelings of the men to assure them that officers and men were all treated alike, for they well knew that the self-interest of the caterer would lead him to send the best cook and the best cuts of meat to the headquarters mess. The dishes invariably praised were meat-hash, Lyonaise potatoes, and baked beans; and when such articles figured conspicuously on the table, the answer to my question "How is the food to-night, boys?" was always a stentorian "Out of sight." The reasons for the popularity of these dishes were, I think, that such articles were uniform in quality so that there was no ground for unfavorable comparison with other tables; because they were within the range of successful field cookery, and were, moreover, staples of the home *cuisine*, so that their good quality was appreciated. In regard to the criticism of the meats, the economical spirit of the caterer led him occasionally to class as roasts some pieces that were only suitable for the soup-kettle, while the complaints of poor cookery were generally due to actual inefficiency on the part of some cook. A point not foreseen was the necessity of more waiters than are ordinarily provided for the same number of men, in order to get the food on the table rapidly enough to keep it hot and palatable and to satisfy the clamor of the men.

This experiment in regimental catering was, however, from a hygienic standpoint, a notable success, and there were very few to report at surgeon's call, in place of the customary thirty or forty victims of distended heads and collapsed abdomens; and after the first two days there was practically no sickness at all.

On the whole, I should certainly favor the adoption of this method, with such improvements as could be easily introduced. The

erection by the State of a large, permanent structure for kitchen and mess-house would secure uniform and satisfactory cooking, inasmuch as good ovens and chimneys could be built, and cold-storage rooms on a suitable scale provided. By a recent bill the State of Massachusetts has authorized an expenditure for this purpose, and suitable buildings are now under way to be in readiness for the summer encampment of the First and Second Brigades. If the State could go a step farther and cook the rations, issuing each day the actual quantities needed upon requisition of the company commander, and deducting the cost from the pay of the men, some additional advantages would be gained. There could be efficient medical inspection of the raw food and also of the cooked ration, and a practical lesson in this most practical duty of a sanitary officer could be given to the medical staff by detailing a medical officer for each day's service in this capacity. This slight amount of experience might be of great benefit in teaching a medical officer how to inspect and select rations intelligently when ordered out on a riot call or other emergency. The militia should be a training school for the medical officer in all branches of his duty, and certainly the health and efficiency of troops in actual service are dependent as much upon judicious feeding as upon any other element of sanitation or hygiene.

It has been recommended by some medical officers of the National Guard that the troops in summer encampments should be placed on a strict army ration, both as a form of discipline and to inure them to the absence of luxuries that would be their lot in actual service. This seems to me to be altogether undesirable. In the first place, the army ration of meat, bread, and potatoes is so selected because of its portability, its general adaptation to all climates and seasons, and its ready availability at all times. It cannot be at once the best assortment of food for a hot week in July on the sea-coast, and for midwinter in the Rockies. It may be improved upon, from a hygienic standpoint, in summer encampments, by a reduction of the meat ration, and a substitution of fish, fresh vegetables, and fruits. Any change from the customary diet of the men is liable to cause dyspeptic symptoms for a few days at least, so that our militiaman for the brief time of his summer camp would be in a state of transition which would lead to no definite end. Even in time of actual service the comfort and convenience of the men are a prime consideration of the commanding officer, and the most prominent thought in the mind of the soldier himself. As a matter of fact, the army ration is not adhered to in posts and stations where something better can be obtained, as it is well understood that nothing is too good for the soldier—if he can get it. The voluntary endurance of hardship and privation is not conducive to comfort, health, and the best results of drill, nor attractive to the volunteer citizen soldier. As far as the health of a camp is concerned, better results can be obtained by a varied diet, carefully selected with reference to the time and place of encampment, and adapted to the needs and habits of the men who constitute the force. This selection should be made under the guidance of a competent medical officer, who, by this experience, is himself trained for similar duties if called into actual service.

The State of Massachusetts has adopted an emergency ration, sufficient for one day's subsistence, consisting of pilot-bread one pound, luncheon or corned beef one pound, coffee three ounces, and sugar four ounces, per man. With each company is placed a field cooking apparatus with which the men may learn to prepare their ration. This will prove serviceable on a one day's tour of duty, but for a week's encampment I think few medical officers would approve such a digestive experiment. If, however, the catering of a summer camp be done through a commissary appointed by the State, and by consultation with a medical officer, the best results from a hygienic standpoint would be reached, and incidentally the cost per man could be reduced probably fifty per cent., to the great advantage of the company treasuries. It is to be hoped that all future dietetic experiments of this nature may be reported at the meetings of this Association, that the medical officers of our National Guard may learn as well as teach.

In conclusion I would emphasize particularly the following points:

Sickness in summer camps is due principally to injudicious diet:

This could be remedied in great measure by a medical inspection of food:

Permanent kitchens would secure better cooking:

Issuance of cooked rations by the State would render efficient inspection possible:

The duty of such inspection would be a practical training for medical officers:

The fixed army ration is not applicable to volunteer troops, and never desirable if better rations can be obtained:

State catering would reduce the cost to companies fifty per cent.

Boston, Mass.

DRUG PIRATES.

The following, clipped from the editorial columns of the *Medical Brief*, is certainly an epitome of wisdom:

It is very difficult to be honest. Merit has many foes. For one man of sterling worth we have ten sycophants or servile imitators. This is well illustrated in the realm of the manufacturing chemist. He makes a discovery which he believes will be of benefit to the profession, and determines that it shall conform to the highest standard. He deserves success and gets it; but immediately a horde of pirates, who live by the prostitution of what wit they possess, begin to prey upon his reputation.

He, maybe, imports his drugs and chemicals at a vast expense, in order to obtain them perfectly pure; his unworthy imitator buys the cheapest grade of goods, perhaps substitutes other ingredients, in order to reduce the cost of manufacture to a minimum.

Sometimes the chemical pirate asks twenty-five or fifty per cent. less for his product. He can well afford to do so, because the price is nearly all profit.

Of course, base imitations of reputable drugs eventually die, in accordance with the law of "survival of the fittest," but in the meantime the doctor is duped, his patient injured, and the reputation of the legitimate manufacturer suffers.

Therefore, we ask the doctor to discriminate in his patronage of this most important branch of medical industry. Look with doubt upon the preparation offered you as a *substitute* for one experience has proved valuable, especially when price is made an inducement.

The Medical Age.

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Editorial.

OF INTEREST TO OUR READERS.

In July the MEDICAL AGE will publish the first of a series of articles by Professor Joâo Vicente Torres Homem, Professor of Clinical Medicine in the College of Rio de Janeiro, entitled "The Clinical Study of Pernicious Fevers." Doctor Homem is a member of the Imperial Academy of Medicine, corresponding member of the Academy of Sciences at Lisbon, etc., and is perhaps the most able author of the century, so far at least as this subject is concerned.

The work deals practically with the diagnosis and treatment of a great variety of malarial fevers, especially those ambiguous fevers of malarial character which often are to be found in non-malarious regions—a class of maladies that are often mistaken, and consequently mistreated.

Some years ago Doctor George B. Wood described a bilious pneumonia—*i. e.*, pneumonic pernicious fever—from his own experience, and yet oddly enough classified it among other fevers of pneumonia instead of placing it, as he should have done, in the class *miasmatica*. There is little doubt that this error has aided not a little in the idea that has arisen that quinine is useful in pneumonia.

This interesting brochure has been very carefully translated and annotated by Surgeon George P. Bradley, of the United States Navy, and will doubtless prove a valuable contribution to ætiology.

THE TABLET TRITURATE.

From the standpoint of the physician who desires to dispense his own medicines, the tablet triturate is undoubtedly a great advantage. Its benefits are known division of quantities, convenience of carriage and dispensing, and to a certain extent an agreeable form of medication.

There are, however, certain objections to tablets, not the least of which is that the market is well stocked with preparations of this class of an inferior quality manufactured by concerns which have no interest in the welfare of the patient or the success of the practitioner—only in the financial emoluments that are to be obtained.

Again, while this mode of division is eminently satisfactory for dried drugs, it carries with it a great amount of uncertainty (except perhaps, under the most careful manipulation) in-so-far as fluid drugs are concerned. Recently came to our knowledge the fact that tablet triturates supposed to represent one minim each of tincture of aconite were dispensed, and two tablets two hours apart in one instance, and three tablets one hour apart in the other, induced markedly the physiological influence of the drug. Further, we have heard complaints from physicians that tablet triturates supposed to represent a definite quantity often proved inert.

When is understood the difficulty of manufacturing tablet triturates, the necessity of adding other ingredients in order to secure just the proper cohesion, it will be realized that it is possible to substitute inferior drugs or even less quantities than pretended without any means on the part of the dispenser of detecting the fraud. With such knowledge before us it becomes a matter of query whether tablet triturates really possess the value that theoretically they are supposed to.

Again, many drugs cannot be employed in this form, but must be compressed. Compressed tablets, as a rule, are difficult of solution, and are no way benefited by the adding of a coating which some firms announce. The activity of the drug, moreover, is often in a measure inhibited, whether in compressed tablet or the tablet triturate, by the extraneous matter added for the purpose of coherence.

Elegant pharmacy is all very well in its way, and undoubtedly a valuable adjunct to the practice of medicine in many instances, but when such elegance is obtained at the expense of solubility, divisibility and activity, it surely behooves the medical man to pause when prescribing and consider all these facts before deciding upon the form in which the drug shall be administered. Indeed, the original idea of the tablet triturate was not that this form of medication should come into general use, but merely that it would be a convenience in meeting emergencies until a larger and perhaps more perfect prescription could be compounded.

LIMITATION OF VIVISECTION.

The benefits derived from vivisection are incontestable; but, like many other good things, this is frequently carried too far or wrongfully applied. The *Scientific American* declares the general public, and even members of the medical profession, are ignorant of the extent of vivisection and the method of its practice—a statement undoubtedly not in the least exaggerated.

Recently it has been quite "the fad" to present animals to classes in public schools, and perform vivisection thereon for the purpose of illustrating some point perhaps of very little practical utility to the student. This certainly is pernicious and tends to deaden the youthful mind to the suffering of helpless creatures. Equally pernicious are some of the vivisections practiced in medical schools, that constitute merely matters of interest and are of no scientific import—of such character are certain dissections for purely theoretical purposes, and for elucidating the action of certain drugs which have vainly sought a status in therapeutics. In such cases a mere statement of facts should be amply sufficient without the torturing of a number of innocent creatures.

The unnecessary side of vivisection and the cruelties accruing thereto have recently been brought before the public of New York City in a most vivid way. The result has culminated in the formation of a "Society for the Protection of Animals under Vivisection," the object of which is to spread information regarding the extent of vivisection and to enforce the laws regarding it. This

organization, however, is not in any way antagonistic to necessary operations, performed by professors of medical schools, but is emphatically opposed to the unauthorized methods whereby animals are subjected to useless cruelty and to painful experiments which merely illustrate well known truths.

In most of the States vivisection is without legal restriction; but the commonwealth of New York provides it shall only be practiced under the authority of an incorporated medical school or university (Laws of 1867, Chapter 375).

In the States which have no laws regarding vivisection, public opinion must be relied upon for sentiment condemning its unnecessary practice.

This organization is in no way connected and has nothing in common with the so-called Anti-Vivisection Society, but is organized solely in the interests of humanity. Under such circumstances it deserves the best support of the medical profession.

AMATEUR LAPAROTOMIES.

The Associated Press is responsible for the statement that Doctor Thomas O'Reilly, of St. Louis, inspired by some incident brought to his notice as medical consultant, and which he refuses to reveal, wrote a letter to the Health Commissioner of that city calling attention to the many deaths resulting from laparotomy. He characterized the knife of the surgeon when employed in such operations to be "fully as dangerous as that of the assassin," and in the name of humanity asks the Commissioner to devise some measure whereby sufferers may be protected from this operation except where it is recommended by two or more responsible physicians.

There is perhaps some error in this statement; but whether there is or not, the idea embodied is certainly an excellent one. The craze for opening the abdominal cavity, on the part of raw and irresponsible individuals, fledgelings just from college perhaps, has attained such magnitude that it certainly requires some means devised whereby to keep the wholesale slaughter in check.

The number of laparotomy and appendicitis operators has risen into the thousands; every cross-roads possesses at least one or two, and each one looks askance at his fellow practitioner lest he should succeed in securing one more operation than himself; every journal teems with reports of such operations, some real, often pure fabrications, and the end is not yet! The "belly-rippers" are certainly in the majority.

When will teachers and students learn there is something in surgery besides bacilli and knife, and that the true art lies in conserving rather than in attempts to emulate the shambles of the butcher?

It is high time common sense was made a part of the curriculum of medical schools, and likewise to take the place of self-laudation now indulged in by half-educated teachers who "cut for record," being anxious to convince the world, especially the medical-student portion thereof, that they alone are the greatest representatives of the specialty they purport to practice.

THE PREVALENCE OF HYDROPHOBIA.

We have before had occasion to mention the increase in hydrophobia due to popularizing the experiments of individuals. Recently Doctor Caffé, before the French Academy, made the emphatic statement, which the editor of the MEDICAL AGE heartily indorses, that spontaneous rabiform hydrophobia is the only rabies that exists, and that is a *moral* rabies!

Before M. Pasteur's system was invented, statistics show that in France a yearly average of about nineteen persons were officially reported to have died of hydrophobia. Now, strange as it may seem, the number of persons who annually report themselves, or are reported, as having been bitten by rabid animals, averages from fifteen hundred to two thousand.

With this evidence before us we must conclude that rabies, if it does exist, is a very rare disease—rarer to-day than in the past—and hydrophobia more or less a form of hysteria. Were there less talk about it, it would be better for the people at large. A little more knowledge, on the part of medical men, of the human nervous system, and a little less ignorance of the nervous system of the dog, would probably enable us to escape

hydrophobia entirely; at least fewer would die from it, or be saved by the fetich termed "preventive inoculation."

THE INCREASE OF THE CRIMINAL POPULATION.

At the meeting of the National Prison Association held at St. Paul, June 18th and 19th, the statement was made, and apparently well backed by statistics, that the criminal classes are constantly upon the increase, and such increase is out of all ratio to the increase of the general population.

This adds weight to a contention heretofore presented in the MEDICAL AGE, that in prison management, in the care of criminals in gaols, etc., the sentimental should be entirely ignored and the fact recognized that punishment should be punishment in every sense of the word. We, of course, do not advocate cruelty, but certainly things have come to a pretty pass when rank criminals are afforded privileges not attainable by the honest masses, and are treated in a way superior to what they have ever been accustomed to in their extra-criminal life. It is a notorious fact that with certain of the criminal classes the prisons, houses of correction, and gaols are regarded as a refuge from want and as desirable boarding-houses on certain occasions.

THE PREVENTION OF INSANITY.

Recently in the *Alienist and Neurologist*, Doctor William W. Ireland, of Edinburgh, the erudite author of "The Blot upon the Brain," and "Through the Ivory Gate," wrote of mental cultivation and discipline as a means of preventing insanity.

Doctor Ireland lays especial stress upon the value of healthful exercise, and quotes from Sir Francis Bacon the statement:

If a man's wits do wander, let him study mathematics. For demonstration, if his wits be called away ever so little he must begin again.

The study of a new language Doctor Ireland considers as valuable exercise, since it has been "found by experience" to engage the mind without fatiguing or wearying it. So, too, the study of natural science, zoölogy, and botany, with their illimitable fields and cultivation of perceptive and reflective faculties alike, and the opportunity given for out-door exercise, is a valuable means of diversion for "a mind unhinged or liable to become so."

It is further added that it must not be forgotten all men are not studious; the great majority of humanity prefer pursuits which bring them directly in contact with out-door work. He who would escape the morbid current of his doubts and fears should select some one pursuit and involve himself in action concerning it. Of all such occupations, gardening is perhaps the most wholesome and engrossing, since it gives exercise to the body and mind alike, and, though mainly an out-door pursuit, gives some employment under cover.

The paper concludes with a number of excellent suggestions relating to the medical therapeusis of incipient insanity, including also the housing and care of patients.

AN HONEST ADMISSION.

The *American Homœopathic Journal* admits that the *similia* theory is not quite so perfect as some seem to imagine. It emphatically declares that a practitioner thoroughly posted in homœopathic materia medica cannot afford to pin his knowledge entirely to symptoms evoked by the most perfect proving; in other words, that the man is the best homœopathist who acquires all there is to be known about a drug. Further is added, that members of the regular profession go much more deeply into the study of a drug than the homœopath, and consequently it is always wise and prudent to study homœopathic materia medica with the regular text-book at hand.

A little more doctrine of this sort will soon eradicate the almost invisible line which now separates so-called homœopathists and regulars.

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The regular profession can hardly afford to sneer at homœopathists as has been done in the past. The Board of Examiners of the United States Army, as well as that of the United States Navy, does not require any adherence to *pathy* or *ism*, or any recantation

of such, but only a thorough knowledge of scientific medicine. Then in the face of this the fact remains that the Boston University of Medicine, nominally a homœopathic school, with a compulsory course of five years, affords a curriculum equal to that of Harvard, and consequently in advance of any other medical college of any class in North America. Also there are other homœopathic schools whose opportunities and facilities are superior to the vast ruck of so-called medical colleges which permeate the land and serve no purpose but to advertise their promotors. This is humiliating, but truth must sometimes be told.

Would it not be well that measures were taken to establish all medical schools upon the one scientific basis, with equal curriculum? Then *pathy* lines would speedily disappear, and the regular lion, homœopathic ewe and eclectic lamb might lie down together in perfect peace and amity. The question is one of scientific fact, and not of empty theories.

THE VALUE OF VACCINATION.

It is surprising, in this enlightened age, the number of people who object to vaccination without any reasonable excuse therefor. To be sure, there is a large coterie of individuals, chiefly of the persuasion charlatan, who deride the benefits that accrue, but such are noted for neither intelligence or veracity.

As evidence of the value of this protection, there were recently published in England the records of 1,201 persons serving as nurses and physicians to hospital ships of the United Kingdom where smallpox patients were confined, during a period extending from 1884 to 1893. Of all this number only six contracted smallpox; these had only a mild form, and all recovered. To occupy these positions it is compulsory upon the persons to have been vaccinated.

A DISCOVERY.

A tale comes from abroad to the effect the horned poppy, a plant described by Pliny and Dioscorides, has been given back to us. The statement is, that after the scoriæ of the old Greek silver mines at Laurium were cleared away, several new plants were discovered growing in earth which had been brought up from a considerable depth and exposed to the sun and air. Among them was this horned poppy whose seed had been buried at least 1,600 years.

How much salt will be required to digest the foregoing is left to the individual judgment of our readers.

EDITORIAL NOTES.

Chian Turpentine in Cancer.—

In the *Medical Press and Circular* Doctor John Clay reports five cases of grave carcinoma relieved by means of Chian Turpentine. He remarks such favorable results can be obtained only before the disease has progressed so far as to invade the general system; yet in the latter case improvement can be effected as regards pain and hæmorrhage.

During the past nine years Doctor Clay has treated a number of patients with uterine carcinoma with Chian Turpentine, who are still alive and present every appearance of health. When it becomes necessary to remove carcinoma of the breast by the knife, he considers it an excellent plan to administer the Turpentine for three weeks prior thereto, in order to destroy the germs which constitute the cancerous infiltration of the surrounding tissues, and also to continue the remedy for a year subsequent to the operation in order to prevent return. He remarks he has employed this remedy during the past six years in many cases, and has never seen a return. (The use of opium and morphine is opposed because their prolonged use in increasing doses tends materially to induce cachexia and anæmia.) He prefers pills to the mixture, but such are not to be used in cases of cancer of the stomach or rectum, since they are not digested; here they are to be mashed or broken up and taken in milk, to the number of nine to twelve in twenty-four hours. Finally, Doctor Clay insists that patience is necessary to the carrying out of this treatment, since several weeks may elapse before any sign of improvement is visible.

Crotalus Horridus.—

The following description of securing the virus of the rattlesnake for medicinal pur-

poses receives the sanction of two homœopathic medical journals:

The snake is seized by the neck and carried to the table, and made to bite upon a piece of common window-glass; the result is a thin stream of yellowish-looking liquid thrown out from the fangs at each stroke. The poison on the glass is then absorbed by means of sugar of milk, scraped into a bottle, carefully sealed, and then sent to certain London homœopathic houses which prepare therefrom a tincture to be employed in diphtheria and maladies of a similar nature.

In spite of the fact that the internal administration of the poison of serpents has repeatedly been proven to be nearly inert, our homœopathic brethren suppose it to be possessed of very valuable therapeutic properties.

Who Is He?—

The St. Louis *Medical Review* delivers itself of the following:

Whatever we may think personally of the chief promotor of the new and relaxing feature of the code, we had hoped, from higher local patriotic motives, that his name would head the list of the officers of the American Medical Association for this year. We are disappointed. St. Louis is indignant! A man who has always stood in the front rank for the elevation of the profession, who has given to the world the all-revolutionizing method of feeding the female organism by nutrient vaginal injections, who has gathered basketsfull of laurels of medical immortality by his untiring devotion to the study of proprietary preparations of true merit, such a man would certainly have been an ornament to the presidential chair of the American Medical Association. While we are aggrieved we are not despondent—"genuine greatness will eventually find its proper level."

Who is he?

But —!—

The *Medical Herald* declares that ordinary tarred paper, such as is used in building, makes a very efficient protection in childbirth as an antiseptic and waterproof undersheet: "it is slipped under the ordinary sheet, and when its usefulness is over may be rolled up and burned, the tar aiding combustion."

This is all "very fine oysters," but who is going to settle with the housewife when she finds the linen next to the waterproof sheet hopelessly bedaubed with gas tar; and how many patients would enjoy the odor which would linger around the bed in consequence of such device? While we admit the cheapness of the paper, there is nothing equal to a good rubber sheet, which is always convenient to have in the house for other purposes besides protection to the bed during parturition.

A Strange Error.—

The *San Francisco Chronicle*, while (presumably) borrowing cuts of medical celebrities from the Eastern papers, appears to have been the subject of a practical joke. It publishes the portrait of ex-Justice Walter Ross, of Detroit, as that of President-elect of the American Medical Association, Doctor Donald Maclean. As both gentlemen are remarkably fine-looking, and equally jolly and companionable, the mistake is not, perhaps, so bad.

It seems as if this mutilation and distortion by the daily press "of the human countenance divine" under the guise of so-called illustrations had about reached the limit of absurdity.

Musk in Hiccough.—

The *St. Louis Medical Review* recommends the trial of Musk in obstinate hiccough. This is a remedy very little employed of late years, but certainly possessed of greater value than is generally believed, though its use in the majority of instances is inhibited owing to high price. It is a very diffusible stimulant, acting directly on the nervous and circulatory systems, but without marked energy. It is one of the best of antispasmodics, and consequently may be employed with benefit in various forms of cough, and in general prostration of the system with nervous agitation or irregular muscular action.

Cholera.—

Cholera is increasing in Tripoli, and Malta has established a quarantine against all craft arriving from the former country. Advices from Constantinople report an alarming increase of cholera; and the same is also true

of Portugal and the Mediterranean ports of Spain. All this, however, is not especially astonishing to anyone who knows the condition of Mediterranean ports during warm weather. Furthermore, cholera is almost constantly present in greater or less degree in the localities noted.

Voices of Animals.—

It is a curious fact that the hare, quiet as it is under ordinary circumstances, has a voice which carries farther than that of either cat or dog, when it cries out in fear. The distances to which the voices of different animals will carry have been computed as follows: First, that of the lion; then, in regular order, come those of the hyena, the screech owl, the panther, and the jackal. It is said that the bray of the donkey can be heard fifty times as far as the neighing of the horse, while the cry of the cat can be heard ten times as far as the bark of the dog.

Oxalate of Cerium.—

In *Food* appears the editorial suggestion: "From the fact that Cerium Oxalate proves a satisfactory remedy in most cases where nitrate of silver is generally employed, and that it is moreover a tonic and sedative that may be administered freely without discoloration of the skin, it would seem as if this drug were worthy of a thorough trial in the treatment of epilepsy, chorea, and allied convulsive diseases." The idea certainly is worthy of hearty endorsement.

Remarkable Toleration of Arsenic.—

In the *North Carolina Medical Journal* Doctor S. W. Battle relates the case of a man afflicted with multiple adenoid tumors constantly reappearing after operations, who took large quantities of the solution of Arsenic chloride without unpleasant effect, resulting in perfect relief from these growths. Ultimately the patient ingested from one to two drachms of liquor sodii arsenatis, daily.

Study of Alkaloids.—

In *Lyon Médical*, Doctor Aubert notices a peculiar property of Cytisine, an alkaloid of Laburnum, in that when a fatal dose is administered to an animal it is not found in the blood or the muscles, and consequently the flesh of the creature can be utilized. Cytisine is essentially a bulbar and nervous poison, and discovered after death almost exclusively in the medulla oblongata.

Expensive Americans.—

An exchange states that it costs the people of the United States twenty-five millions a year to be born, three billions to be married, seventy-five millions to be buried, and nine hundred millions to get intoxicated.

The name of the statistician certainly deserves to be handed down to posterity, but thus far he remains anonymous.

Of Course.—

The Christian Scientists in Beloit, Wisconsin, are fighting vaccination tooth and nail. The worst feature of the case is they seem to be numerically strong enough to enter the arena with a fair prospect of success.

Budding Practitioners.—

There are at present 18,910 medical students in the United States, of whom 1,410 are of the Homœopathic persuasion, 741 who have their lot among Eclectics, and 16,759 of the Regular faith.

A Just Clause.—

In the incorporation of the Arkansas State Board of Health is inserted a clause giving the Board power to revoke the license of any physician guilty of habitual drunkenness.

Monument to Charcot.—

A subscription started in Paris for the purpose of erecting a monument to this well known neurologist, already amounts to upwards of six thousand francs.

The Code Sustained.—

The American Medical Association adopted the minority report on the code question, thus deciding against a revision of the same.

Pennsylvania and State Licenses.—

The Pennsylvania Medical Council refuses to accept any State licenses except those of New York.

Items and News.

Composition of Secret Remedies.—

It has been repeatedly pointed out that articles recommended for the cure or relief of disease by persons who are neither qualified to practice medicine or authorized to dispense, should, in all instances, have their nature disclosed and their composition plainly stated on the label of each package, though, unhappily, the law does not require this condition to be observed. The sale of such articles is purely a matter of trade, and in many instances their use is attended with danger, and, as a consequence, the trade in secret nostrums and specifics has been mischievously developed by the aid of puffing advertisements. Many of these preparations, however, contain ingredients of a poisonous nature, and they should be labeled with the word "Poison," as well as the name of the poison, and only be sold, under certain restrictions, by duly registered druggists.—*Times and Register.*

Prescription-Writing.—

A famous physician once made the remark that he would rather prescribe a mixture that acted well than one that looked and tasted good. This sentiment has been approved by many; and yet it is as important, if not more so, in the majority of cases, that the patient should be relieved of his malady pleasantly as well as safely and quickly. When we think of the nauseous compounds which delicate women and children have been compelled to swallow, it is a disgrace for a medical practitioner with the whole range of materia medica before him not to be able to write a prescription for a solution which both looks and acts well. The fault has been in the comparatively little attention devoted by students to chemistry and pharmacy, than which few branches of medical science are of more importance to the practical and successful physician.—*Medical Review.*

Bacteriology.—

Is bacteriology a fad?

Has it proved of any practical benefit to medical science?

What cures has it given us to meet the pathology it seeks to demonstrate?

Does it furnish a rational ætiology?

Has it not retarded medical progress by leading a portion of the profession into a mental *cul-de-sac?—Exchange.*

The Doctrine of Faith.—

Swell of the Period: O doctor, I have sent for you, certainly! Still I must confess I have not the slightest faith in modern medical science.

Doctor: Oh! that doesn't matter. You see, a mule has no faith in the veterinary surgeon, and yet he cures him all the same. —*Tagliche Rundschau.*

Why Man is Ill.—

A Russian scientist has succeeded in demonstrating to his own satisfaction that all disease is due to the fact that people wear clothes.

So, too, we suppose all diseases in animals and birds are derived from their hirsute or feathery coverings.

More than a Modicum of Truth.—

The hypodermatic syringe is a good and useful instrument—to leave at home. It is resorted to only too frequently when other means might be adopted. The opium habit follows its use more readily than any other manner of administration of this drug.—*Louisville Medical Monthly.*

Myrrholin.—

This preparation, introduced by Kahn, of Würzburg, is a solution of myrrh and creosote in oil. He employs in tuberculosis instead of creosote, finding it better borne than other creosote combinations.

Undoubtedly Correct!—

The Coxey movement is the most scientific method of spreading smallpox. Throughout Illinois several of the "army" have been picked up, and isolated because of being victims to the "red pest."

The Great Retired.—

The author of Cerebrine, advertised in the secular press, and sent direct to the patient now, has of course little at risk in the way of ethical repute.—*Cincinnati Medical Journal.*

Asthma Nocturnalis.—

Minute doses of strychnine in combination with atropine are found to ward off nocturnal attacks of asthma if given hypodermatically at bedtime.

A Novel Neurosis.—

A case is on record of an old lady who had an itching eruption on the nose, which when scratched produced voluptuous sensation and sexual orgasm.

The Length of a Man's Legs.—

Professor: How long should a man's legs be in proportion to his body?

Mr. Lowstand: Long enough to reach the ground, sir.

Book Reviews.

THE LOST CANYON OF THE TOLTECS. By Charles Sumner Seely. Cloth; 16mo; pp. 275. Price, $1.00. A. C. McClurg & Co., Chicago.

This most interesting volume is certainly unique, and is based largely upon the traditions and rumors to the effect that there still exists in the unexplored portions of Central America a remnant of that ancient pre-Aztec tribe the traces of whose civilization in Mexico were the wonder of Cortez and his followers. Withal, throughout the plot is an interesting romance, which, however, is in no way obtrusive, but subserves the purposes of education, including delineation of scenery and products peculiar to the region wherein the scenes are laid.

The hero, if we may call him such, of the tale is engaged to an estimable lady, the niece of a typical Englishman, Sir Reginald Taylor. Of course the guardian objects to the lover, he being an American, and is very much disgusted on finding himself aboard the steamer from San Francisco to Panama, on which the lover is already ensconced. To avoid the latter, Sir Reginald, together with his niece, her maid and an Irish valet, leaves the ship surreptitiously at the Gulf of Dulce for the purpose of crossing the Isthmus. This the lover subsequently discovers, and also that Sir Reginald is under the impression that all that is necessary to reach the Atlantic coast is to travel directly eastward by the compass. This excites great fears on the part of Miss Taylor's *fiancé*, who is aware that a direct eastern route, owing to the peculiar conformation of this portion of Central America, will lead not to the Atlantic, but to the Isthmus of Darien, and instead of being a journey of merely a few miles would probably result in long wanderings and privations if not absolute starvation and death. With two friends he starts to the rescue from Panama, takes up the trail of the party, and finds it, as expected, due east. Eventually they come across Sir Reginald attempting the home journey in the hope of falling in with someone to succor his companions. They then proceed to where the niece, nursemaid and valet were left, to find them missing, and also the track of a large number of Indians. Finally they discover a city of cliff-dwellers hidden away in a valley and giving evidences of the ancient civilization of the Toltecs. Indeed, these newly discovered people are Toltecs, and it is in their hands that the remainder of Sir Reginald's party has fallen. In the attempt to rescue these, the lover and his party are obliged to put themselves in the power of the Toltecs, only to find that they will not be permitted to reach the outside world again. After a number of vicissitudes, during which they are persecuted by an evil-minded priest, but are recompensed in part by the friendship of the chief, with the connivance of the latter they are able to make an escape. The priests and a number of followers, pursuing, are overwhelmed by the sudden rising of a mountain stream. From this time on everything is simple, and the party reach the village of San José, whence they return to California.

Throughout the book there is much descriptive matter illustrating natural history of Central America, and incidentally quite an extensive account given of the poisonous lizard known as the Gila monster. The book will well repay perusal, since there is hardly a dull line to be discovered from beginning to finis.

SIR FRANCIS BACON'S CIPHER STORY. By Orville W. Owen. Cloth; 8vo; pp. 250. Price, $1.00. Howard Publishing Co., Detroit and New York.

This volume is productive of no small amount of interest, and it is a matter of regret that space cannot be spared to review it exhaustively. It is even more fascinating than the first volume, and more conclusive of the fact that Doctor Owen has fallen upon a most wondrous discovery. The Doctor has made clear the parentage of Bacon—has unfolded his secret life—and in this volume gives an account of the Spanish Armada, which, *per se*, gives evidence of being no patchwork, but a succinct, careful account written by one who must needs have been very closely conversant, not alone with the political peculiarities of the times, but likewise with scenes and intrigues of Elizabeth's court.

As is natural, the volume has brought forth an overwhelming amount of adverse criticism. This was to be expected, and yet, strange to say, the greater portion of this bears evidence of being composed without any knowledge of the work criticised. These critics, moreover, fail to recognize the fact that Shakespeare's works, so-called, as presented at the present day, and which they love to call "divine," "immortal," are now the result of repeated revisions through many years by the best authors and students; that the original copies are far from presenting the erudition the later do, but, on the contrary, are as patchworky as would necessarily be the case from an attempt to write with a view of concealing within a matter of history. It has been claimed also that Bacon could not be the author of the works attributed to

Spenser, Morrow, Greene, Field, and Burton, and yet the history of these five men, as well as that of Shakespeare, is not at all conclusive of their ability to prepare the essays which bear their names. An examination into the claims of Burton, for instance, as the author of "The Anatomy of Melancholy," reveals the fact that it must have been written before his eleventh year. None of the claims made for these authors evidence the basis of fact necessary to substantiate them.

A System of Legal Medicine. By Allan McLane Hamilton, M.D., and Lawrence Godkin, Esq. Cloth; 8vo; pp. 657. Price, $5.50; sheep, $6.50. E. B Treat, New York.

The first volume of this work is now ready for delivery, and it materially surpasses the promises made for it by the publisher. A comprehensive review would be too long for our columns, consequently we can only outline its scope by means of the table of contents:

Doctor A. T. Bristow deals with Medico-Legal Inspections and Post-Mortem Examinations; Doctor F. A. Harris with Death in its Medico-Legal Aspects; Professor James F. Babcock with Blood and other Stains; Doctor Allan McLane Hamilton with Identity of the Living; Benjamin N. Cardozo with Identity and Survivorship; Doctor Lewis Balch with Homicide and Wounds; Charles E. Pellew, Ph.D., with Poisoning by Inorganic Substances; Doctor Walter Haines with Poisoning by Alkaloids and Organic Substances; Doctor Victor C. Vaughan with the Toxicologic Importance of Ptomaines and other Putrefactive Products; Doctor Brandreth Symonds with Medical Jurisprudence of Life Insurance; Cortlandt F. Bishop, Esq., with Accident Insurance; R. C. McMurtrie, Esq., with Obligation of the Insured and the Insurer; William A. Purrington, Esq., with Certain Legal Relations of Physicians and Surgeons to their Patients and One Another; Doctor W. T. Gibb with Indecent Assault upon Children.

Withal the volume is illustrated with eight special plates and eighty-three woodcuts and half-tone engravings.

Whooping-Cough. By Doctor H. Richardière. Cloth; square 16mo; two volumes; pp. 162. Price, 50 cents per volume. George S. Davis, Detroit.

This most interesting and comprehensive brochure is by a well known member of the faculty at Paris, and the translator, Mr. Joseph Helfman, has in a remarkable degree caught the spirit of the author. Volume I embodies the history, ætiology, general description, period of début, second period, and period of decline, duration of whooping-cough, accidents and complications of whooping-cough. The second volume deals with the varied complications, thoracic, laryngeal, and nervous; complications of the mouth; secondary infections; forms; prognosis; diagnosis; pathological anatomy; nature and treatment of whooping-cough. As a whole the volume is most commendable, and perhaps the most complete treatise on the subject ever yet offered the medical profession.

Prompt Aid to the Injured. By Alvah H. Doty, M.D. Cloth; 16mo; pp. 304. Price, $1.50. D. Appleton & Co., New York.

This manual is intended for the instruction of medical men as well as the laity in emergencies in order that the sick or injured may be promptly made comfortable. The author explains each topic in a plain and simple manner, and in employing medical terms has even gone to the trouble of giving also their lay synonyms. Numerous illustrations have been inserted to aid in making the work more intelligible. Of the value of the volume ample evidence is afforded in the fact that it is now in its second revised and enlarged edition.

Treatment of Typhoid Fever. By D. D. Stewart. Cloth; square 16mo; pp. 104. Price, 50 cents. George S. Davis, Detroit.

This little volume will be especially welcome at this season of the year. It appears to be a very thorough and comprehensive presentation of the subject, and, beginning with prophylaxis, general and special, deals with the general management, specific and antiseptic treatment of special symptoms and complications. We bespeak for it a more than ordinary kindly reception.

Essentials of Diseases of the Eye, Nose, and Throat. By Doctors Edward Jackson and E. B. Gleason. Cloth; 16mo; pp. 290. Price, $1.00. W. B. Saunders, Philadelphia.

This is the second edition, duly revised, of Number 14 of Saunders' Quiz Compends. We have before had occasion to review this volume, and can only add that the new edition is well up to date and a very concise outline of the subjects treated.

The Care and Feeding of Children. By L. Emmett Holt, M.D. Cloth; square 16mo; pp. 66. Price, 50 cents. D. Appleton & Co., New York.

This is a catechism for the use of mothers and the nurses of children. It amply fulfills the requirements in the way of simplicity, brevity and exactness with reference to infant feeding and nursery hygiene.

Therapeutic Brevities.

Poisoning by Aconitine.—Doctor Veil, in *La France Médicale*, reports a case of poisoning by aconitine, in which death appeared inevitable, successfully treated with hypodermatic injections of Caffeine. It seems that twelve milligrammes (nearly one-fifth of a grain) was taken accidentally, and the error not discovered until half an hour later. A strong emetic and two purgatives were immediately administered. The symptoms, however, were most alarming: the pupils widely dilated; the pulse thirty six and very weak; cramps in legs, and general muscular trembling. One gramme of Caffeine and three grammes of Sulphuric Ether were injected subcutaneously, followed two hours later with another dose of like character. In the succeeding six hours four more injections of half a gramme each were administered. When the vomiting ceased the patient was given champagne, tea, and rum, and artificial heat was applied.

Cocillana.—The medicinal effects are similar to those of ipecac, viz.: emetic, cathartic, stimulant, relaxant, expectorant and diaphoretic; there is increased secretion from all glands.

In cases of incipient or acute hyperæmia of mucous surfaces without secretion it is directly indicated and acts nicely. Here it is often superior to ipecac in its action. In dry acute bronchitis its effect is a superior one. In pneumonitis involving the bronchial structure, without secretion, it will be found serviceable. In the dry, hoarse, barking variety of winter cough without secretion, so common in cold, damp regions, it can be combined with *Lippia Mexicana*, and such a combination will produce magical effects. Five or ten drops of the fluid extract will be found a proper dose, repeated every two or three hours.—*Chicago Medical Times.*

Potassium Iodide.—This is one of the most valuable remedies, but also one of the most tricky. We cannot, however, afford to cease using it, simply because in some cases it acts disagreeably or even badly. Soreness of the throat and running at the nose are annoying, but when instead of causing a pharyngitis or a rhinitis the drug gives rise to a catarrh of the bowels with severe diarrhœa the case is more serious. . . . . Possibly the most frequent oblique action of Potassium Iodide, after irritation of the mucous membrane of the nose and throat, and iodic acne, is purpura. . . . . It is very difficult to make a chemically pure drug, yet in no case is the price so great as to preclude being dispensed at the usual rates, leaving a fair margin of profit.—*Proceedings of the California State Medical Society.*

Benzoate of Sodium.—The combination of borate of soda and benzoic acid is extremely beneficial in various forms of kidney and bladder difficulty. Perhaps the most advantageous results are obtained when there is an excess of insoluble urates or of uric acid; the urates are at once converted into soluble, harmless, easily eliminated hippurates.

In high specific gravity of the urine, excessive urea in lithæmia, in lithæmic albuminuria, and renal hyperæmia resulting from these conditions, the mixture is exceedingly serviceable; it also affords satisfactory results where there is irritable urination with sharp and cutting pain, and spasmodic pain with burning, or frequent desire to pass urine the quantity being but small.—*Chicago Medical Times.*

Strychnine as an Antidote for Chloroform Poisoning.—Doctor Washburn records a case in which two ounces of chloroform were swallowed with suicidal intent. The pupils were widely dilated and inactive; respiration so shallow as to be almost imperceptible; pulse weak and irregular like that of one dying. One-twentieth grain of Strychnine was injected subcutaneously, and artificial respiration applied, with the result that after a few minutes the pulse improved and the respiration became deep and full. After an hour another injection of one-sixtieth grain of Strychnine was given. In two hours the patient was fully rallied. The patient, however, experienced as a result a severe attack of gastritis.—*Therapeutic Gazette.*

Opium in Epilepsy.—At a recent meeting of the New York Academy of Medicine, Doctor Joseph Collins set forth his experience with this agent in fifty cases. He gave from a half to two grains daily, gradually increasing to fifteen grains. After a few weeks the opiate was replaced by half-drachm doses of bromide of sodium, four times daily, soon gradually reduced. All cases except one were benefited, and in two there was no return of the convulsions up to the time of the report. Doctor Collins does not regard the drug as a specific, but considers it a valuable adjuvant

to the bromides, and entitled to prominent place in the management of this obstinate malady.

Nerium Oleander.—Oleander certainly has a direct action upon the heart, though its influence as yet has not been observed in a manner superior to the better known heart remedies, unless it is in atheromatous conditions. When a correct diagnosis of this class of heart disorders is made, Oleander may be prescribed with a reasonable expectation of success. It reduces blood-pressure, slows heart action, and regulates the pulse-beat. Where dyspnœa and œdema are present it is especially indicated, as its diuretic effect is sufficient to quickly overcome these conditions. The diuresis increases the solid constituents of the urine as well as the water. The agent is best given in small doses often repeated.—*Medical Times.*

Antidote for Carbolic Acid.—Doctor Moreit, of Ancona, in a case where thirty grammes of carbolic acid was swallowed by mistake, immediately introduced, by means of rubber catheter, by slow degrees into the stomach a strong solution of Sulphate of Soda. In an hour's time the patient, who had been in a most critical condition, began to revive. Inhalations of ammonia were then used to hasten the process, and little by little the unfortunate rallied so that an emetic, followed by a dose of lime-water, finished the cure.—*Medical Times and Gazette.*

Management of Eczema.—Cousin recommends for eczema the method of Doctor Tenneson, namely, the application of Caoutchouc coverings; he regards it as a panacea in all forms of this disease.—*Thèse de Dermatologie.*

Doctor Johnston, in the *Journal of Cutaneous and Genito-Urinary Diseases*, believes that we have in the compound tincture of Benzoin, applied either pure or in ointment, a remedy of marked service in the treatment of the seborrheic form, and also the chronic eczema of the eyelids and lips regardless of origin.

Teucrin.—Moorhoff has a "sure cure" for lupus, lymphadenitis, actinomycosis, and cold abscess, in Teucrin, the active principle of *Teucrium Scordium.* He injects into the tissues surrounding the sore, with the result febrile excitement is induced which lasts perhaps two days, after which the condition rapidly improves. He claims to have used in three hundred cases, and expresses the utmost confidence in its influence. One injection is usually sufficient, but in more malignant cases repetition is demanded.

Thyroid-Feeding in Skin Diseases.—Doctor A. T. Davies does not in any sense consider Thyroid-feeding a specific in skin affections, but regards it as having only a powerful effect in altering the condition of the skin and in laying, as it were, the foundation for a better and healthier state. In cases of psoriasis of short duration, he would expect it could alone effect an improved condition of affairs, but in cases of longer duration its value lies in assisting the action of the remedies used. —*British Journal of Dermatology.*

Reduction of Difficult Hernia. — In the *Wiener Medizinische Wochenschrift* a writer advises refrigeration in hernia in which reduction is difficult. He places the patient in the dorsal position, thighs and legs flexed, and the pelvis elevated. Two tablespoonfuls of ether are poured on the tumor every fifteen minutes, and in a few hours (he declares) reduction occurs spontaneously or after slight manipulations. This process has afforded good results in twenty out of twenty-six cases.

Solanum Carolinense.—Horse Nettle is again being brought forward for the relief of excessive sexual desire—satyriasis. It quiets sexual excitement—takes away the desire, as it were—and prevents the tendency in nervous and excitable young men to constant erection, or to erection from every exciting cause. It will be found of value in the treatment of spermatorrhœa with these symptoms, and will assist in the relief of the habit of masturbation.—*Medical Times.*

Apiol.—This preparation from parsley is frequently advised as a remedy for suppression of the menses, and if pure is most certain where there is merely functional derangement. In Paris it is universally used as a stimulating emmenagogue. It induces hyperæmia of the ovaries, relieving certain forms of dysmenorrhœa. It relieves suppression and regulates the menstrual flow, and in some cases not due to anæmia alone it produces marvellous results.

Arsenic in Pernicious Anæmia.—Doctor E. A. Barton writes *The Lancet* (London) of a case of pernicious anæmia relieved by the

prolonged administration of Fowler's solution given thrice daily, in connection with a generous diet. In ten weeks the patient was entirely recovered, and the number of red blood-corpuscles had risen from eighteen to seventy-six per cent.

New Method in Stricture.—In *The Lancet* (London) Doctor Charles Smith gives his experience in very severe cases of urethral stricture. Relief was obtained, making it possible to pass the smallest catheter by gradual dilatation, by means of water pressure from a fountain syringe. The stream was cut off at intervals to allow the patient to rest from the pressure, and hot baths were used in conjunction.

With proper precautions the plan recommends itself as a rational and probably successful method.

Chekan.—The new Chilian product Chekan is highly recommended by Doctor William Murrell, of London, for coughs, especially in elderly people. Doctor Naphey declares it to be a tonic expectorant with diuretic qualities. Bronchitis is another form of trouble for which it is highly extolled.—*American Homœopathist.*

Esencia de Coca.—Doctor Charles Seller asserts this to be the most useful of "pick-me-ups." Where one is slightly ill and must keep at work—as, for instance, a clergyman who has not sufficient strength to go through his sermon without some aid—it is a valuable remedy.

Prurigo.—Doctor Spiegler has obtained good results with Sulphophenate of Sodium in five- to ten-per-cent. ointment, using equal parts of vaselin and lanolin as a base; it is non-toxic and non-irritative.—*Journal of Cutaneous and Genito-Urinary Diseases.*

Euonymin.—Doctor Hale declares the concentration prepared from Wahoo bark is a specific remedy for bilious dyspepsia with yellow tongue and offensive breath, frontal headache and clay-colored stools.

The Oil of Cade is an old fashioned remedy which was once used extensively as a cure for eczema and kindred disorders, with better results than many more recent remedies. It has cured many cases of alopecia.

Hysteric Dysmenorrhœa.—In the nervous dysmenorrhœa of hysteria there are few remedies so valuable as Hyoscyamine administered hypodermatically in doses of one-eightieth of a grain.—MARTIN.

Piscidia Erythrina.—Jamaica Dogwood has been found to exercise good effect upon the pain of irregular menstruation. It regulates the flow in many cases, both as to quantity and as to time.

Hæmorrhoids.—The tincture of the Horse Chestnut in ten-drop doses every three hours is said to be of especial value in relieving hæmorrhoidal turgescence and rectal congestion.

Summer Diarrhœas.—Do not neglect the use of Arsenite of Copper in the treatment of acute watery diarrhœas of infancy and childhood peculiar to hot weather.—JOHNSTON.

An Efficient Emmenagogue.—The *Chicago Medical Times* recommends a ten-grain dose of Santonin taken with a hot mustard foot-bath at bedtime.

Hæmorrhoids.—In the habitual constipation which accompanies piles there is no more successful remedy than Cascara Sagrada.—MONTGOMERY.

Dyspnœa of Heart Disorders.—The latest remedy recommended comes from Eclectic sources, and is the tincture of *Coronilla scorpeoides.*

Acne.—Stellwagen says that in acne arising from uterine irritation the most potent remedy is normal liquid Ergot given internally.

Cimicifuga.—Ten to thirty drops of normal liquid Black Cohosh, after meals, effectually relieves seminal emissions.—REED.

Diabetes Mellitus.—Robinson recommends Chloride of Gold and Sodium in one-twentieth grain dose three times daily.

Pareira Brava.—This is a good old-fashioned medicine for cystitis, quickly overcoming blood and mucus.

Quebracho is said to greatly increase the oxygen-absorbing power of red blood-corpuscles.

Medical Progress.

HYDRASTININE HYDROCHLORATE. — Although its medical properties have not been thoroughly worked out, it bids fair to be a very important addition to the resources of the profession; its physiologic and therapeutic range seems to be very wide. Kiselew employed it to some extent with success in epilepsy, having been led thereto by Tarchanoff, who discovered it decreases the excitability of the psycho-motor cortex of the brain and is capable of arresting convulsive attacks in epileptic guinea-pigs; its action upon the spinal cord appears to be that of a depressant, as Marfori and Archangelsky assert that the paralysis and loss of reflex activity induced in animals by poisonous doses are of centric origin, and even claim it is a natural antagonist of strychnine.

Present knowledge indicates that Hydrastinine belongs to the group of poisons which have a universal action upon muscle fibres, so that it affects the voluntary muscles and also the muscular coats of the intestine and the muscle fibres connected with the circulation. It certainly would in overwhelming dose paralyze these muscle fibres, but, as with strophanthus and most other known muscle-poisons, the period of paralysis is preceded by a long period of excitement; thus the intestinal paralysis is markedly increased and the blood-pressure greatly raised —the increase of pressure appears to be in part due to direct stimulation of the heart, and in part to contraction of the blood-vessels.

Marfori and Von Bunge both found that the alkaloid greatly increases the amount of work done by the isolated frog's heart. In poisoning by the drug there is a final fall of arterial pressure, in part the result of lack of heart power, but this heart failure seems to be caused indirectly and not to be the result of an immediate action upon the viscus, since even when the pressure is very low artificial respiration will restore it to normal. Evidently the heart depression at such times is due to an excess of carbonic acid, which has accumulated in the blood. Marfori also determined that the drug greatly decreases the size of the kidney, and that the contraction of the vessels in the organ may be so powerful as even to arrest secretion—the contraction of the vessels is chiefly of peripheral origin, or, in other words, is chiefly due to direct action upon their muscular coats.

Hydrastinine is evidently a heart tonic, and, although it has been introduced into therapeutics for other purposes, it will probably prove a valuable remedy in cases of cardiac weakness, and certainly should be tried with this object. It is plainly a much safer remedy than the alkaloid hydrastine, in that even in toxic dose it does not directly depress the heart. Its influence as a calmative depressant of the brain and spinal cord, conjoined with the stimulant action upon the heart and arterioles, should render it a very valuable remedy in cases of general feebleness and lack of circulatory power, occurring in hysterical women and men; and when to these powers are added the extraordinary influence it possesses over the uterus, its probable importance grows. In all forms of menorrhagia, whether due to simple atony, to fibroids, or even more severe organic disease, Hydrastinine is a very valuable remedy.

My own experience accords with much that has been determined in finding that it is distinctly more powerful than ergot. The arrest of the hæmorrhage is usually so prompt that it hardly can be due simply to vascular contraction; and there seems little reasonable doubt that the alkaloid is a powerful ecbolic. It is notorious that ergot frequently fails to act, while Archangelsky found that in pregnant animals Hydrastinine invariably induces pronounced rhythmic contractions of the uterus. Moreover, Doctor Faber, as the result of a number of trials upon women, states that, given hypodermatically during labor, Hydrastinine very notably increases the force and length of the uterine contractions, causing a spasm which affects all portions of the organ, and is similar in character to that provoked by ergot; in some of the cases there was uterine tetanus, lasting as long as fifteen minutes. Faber also asserts that distinct contractions can be produced in the unimpregnated womb.—PROFESSOR H. C. WOOD, in *University Medical Magazine.*

LITTLE CHILDREN AND HEAT. — Much misery would be avoided if mothers and nurses could be made to realize that in hot summer weather children are far more likely to suffer from heat than from "taking cold." There is one source of cruel suffering and dangerous or even fatal illness in very hot weather which is often overlooked, because it is unsuspected: It is *want of water!*

At 11 A.M. of one of our hottest days I found in my consulting-room a woman, and with her a weak, rickety, three-year-old child with big head, groveling on the floor, pressing its forehead against the cool oilcloth; was clad in thick woolen overcoat and heavy "Tam O'Shanter." The child had become

restless and almost convulsed at night—eyes rolling, face and fingers twitching, sweating profusely, and passing urine in small quantities every ten minutes, crying with pain. I asked why the thick overcoat and heavy cap, and elicited the reply she was afraid to bring the child out without an overcoat, as it was "subject to bronchitis." I inquired if it ever received water to drink, and the mother indignantly answered in the negative, asserting it was allowed only pure milk and, being weakly, strong beef-tea. I gave it half a glass of water, which was seized upon with a joyous sound and eagerly drank. When the greater part was gone I took away the glass, but the poor creature screamed for it and drained it to the last drop. The change was immediate and marked. The little one no longer groveled, sweating, restless, panting, miserable, hardly conscious of its surroundings, but sat up cheerfully and began to look around and even to talk. I took off the thick coat and cap and ordered it to be lightly clad, to be kept as cool as possible, and to have its hair cut short; also to be given a little water frequently and to have its milk and beef-tea diluted. I saw it three days later. Though the hot weather had persisted, the child was bright and well; had no more twitchings, no more convulsions, no more restless nights; micturition was no longer painful or too frequent, and there was no excessive sweating.—*Archives of Gynæcology, Obstetrics and Pediatrics.*

Relation Between the Alkalinity of the Blood and Intestinal Absorption.—Castellino and Cavazzani experimented to discover whether, and how, the process of absorption from the intestine is modified in association with altered physical and chemical conditions of the blood; to establish how such changes of the blood influence in the human subject the general metabolism of the body.

They found that in distinctly alkaline serum the reticulum of the hyaloplasm of leucocytes undergoes stimulation, which causes increased irritability and more active vital manifestations in the protoplasm. In liquids poor in alkali the protoplasm appears torpid and slow in its reactions, but contact with alkaline serum speedily evokes increased activity. Contact of faintly alkaline serum with leucocytes in a medium favorable to their activity depresses the movements of the latter and accelerates the processes of degeneration. Serum which is but faintly alkaline tends to produce transparency of the protoplasm, and throws out the nucleus.

From the foregoing it is argued that alkalinization of the blood favors intestinal absorption, and that as the passage of foods from the intestine through the lining mucous membrane is probably due, in great measure, to the activity of the cells lining the villi and to the leucocytes, alkalies would cause an increase in the rapidity of absorption by stimulating the activity of the protoplasm and increasing its chemiotactic powers.—*Gazetta Degli Ospitali.*

Stricture of the Female Urethra.—Kleinwachter adds three cases of this rare condition to medical literature. The first patient was a multipara, aged fifty-three, who for seven years had been subject to dysuria with symptoms of vesical catarrh. An extensive, very tight stricture of the urethra was discovered. The patient did not submit to treatment.

He also records an instance of senile stricture, an affection first defined by Herman. The patient, aged fifty-six, was obliged to press the hypogastrium in order to empty the bladder completely, and slight pain on micturition set in after the trouble had lasted some time. The stricture was considerable but not nearly complete; the thickening and hardening of the urethra very marked. No. 6 was the largest sized Hegar's dilator that could be passed. This is the ninth recorded case of senile urethral stricture.

In a third case the cause was damage to the urethra during labor. The pathology of such cases is, of course, easy to understand.

The commonest cause of stricture of the female urethra is undoubtedly gonorrhœa. As the tract is short and kept well dilated by the stream of urine passed during micturition, stricture after that disease is less frequent than in man.—*The Practitioner.*

Pathological Anatomy of Italian Leprosy.—Tuczek examined the central nervous system in eight cases of pellagra, and with the exception of one atypical case failed to find morbid changes in the cerebral cortex, in the cerebellum, the pedicles, the pons, the cerebral and spinal meninges, or the peripheral nerves and their roots; the spinal and sympathetic ganglia were also intact, as well as the nerve fibres of Clarke's columns and of the meningeal zone of Lissauer. In all, however, there was bi-labial sclerosis of the posterior columns, and in six cases the lateral pyramidal tracts were diseased; the disease of the posterior columns appeared to be most advanced.

The author believes that the morbid pro-

cess in this form of leprosy, as in ergotism, is different from that in tabes, basing his opinion on the integrity of the posterior roots and the peripheral nerves of gray matter, and of Lissauer's zone. He holds it to belong to the combined scleroses.—*Revue Neurologica.*

RHEUMATISM IN THE LOWER EXTREMITIES.—Doctor V. Manteuffel, in the *Medical Magazine*, declares that many cases are due to arterio-sclerosis. The subjective symptom is an indefinite pain, felt now in the sole of the foot, now in the small bones, and again on the top of the foot. The objective sign is a yellowish, blanched dryness of the skin as if dusted with meal, and an absence of rose color in the nails; often a peculiar red œdema that fluctuates with the subjective symptoms. The diagnosis is difficult except for the objective symptoms. The œdema is due to the autochthonic thrombi. He advises lowering blood-pressure, rest, and avoidance of sudden changes of temperature; elevation and rest of the limb when œdema occurs; the heart strengthened with exercise, especially of the upper extremities and body, with slight massage of these parts.—Massage of the affected limbs should be avoided. Cold baths alone should be employed.

QUINSY AND THROAT OPERATIONS.—Hughlings-Jackson cites a case illustrating that operations on the throat may induce quinsy: A gentleman who had suffered from right-sided tonsillitis for nearly a year previously, had some granulations on the left half of the pharynx touched with the galvano-cautery. For the first two days he was in excellent health, with little or no pain, and able to swallow. On the third he shivered, had pain in the right tonsil, which went through a typical quinsy, the temperature falling and all pain disappearing quite suddenly, though it took several days for the local change to clear up. The cauterized part showed no sign of implication. This demonstrates a traumatic agent may play the part of a predisposing cause to an inflammatory affection having a specific character like tonsillitis, and throws light upon the relation which exists between acute pneumonia and external violence.—*Medical Standard.*

PANCREATIC CHANGES IN DIABETES.—In an essay presented to the International Medical Congress, Doctor David Hausemann, of Berlin, pointed out that there is a form of diabetes occurring with, and another form without, pancreatic lesions. The pancreas may be destroyed by connective-tissue or fatty overgrowth, by tumors or by calculi, and diabetes thereby result. In many such cases, however, so much of the pancreatic tissue may be preserved that no glycosuria is induced. The most frequent pancreatic lesion in diabetes is simple atrophy, and this is found in corpulent diabetic patients as well as in the emaciated, but is met with only exceptionally in other cachexias. The form of diabetes occurring with simple atrophy of the pancreas may be regarded as genuine pancreatic diabetes, in contradistinction to the forms associated with other diseases of this gland which present more casual lesions.

DIAGNOSIS OF SMALL PERITONEAL EFFUSIONS.—Doctor Salvador Garciadiego, of Mexico, in the *Medical Record*, advises that in case of suspected small effusions the patient should be placed on the back at an angle of 45°, and the index finger introduced into the rectum in order to examine the posterior peritoneal fold. In women, the finger can be introduced into the vagina. In case of existing effusion, the finger thus introduced will detect fluctuation. The diagnosis may be confirmed by changing the position of the patient, when the fluid may be made to disappear, returning again on again assuming the first position.

CAUSATION OF HÆMORRHOIDS.—Hæmorrhoids are made up of varicose changes, not in one or two veins, but from a number of smaller branches and capillaries in the mucous membrane, the submucosa, and also in the muscular tissue; these changes are due to injuries to the walls—to an inflammation of the inner wall, extending to the surrounding structures.—The arteries do not participate. Not until the vessels are attacked and their walls deprived of elasticity can an increase of blood pressure cause dilatation, lengthening, and a varicose condition.—QUENSU, in *Revue de Chirurgie.*

EPIDEMIC CATARRHAL JAUNDICE.—The *Maritime Medical News* refers editorially to an unusual prevalence of cases of catarrhal jaundice in Halifax during the months of October, November, and December, 1893. The disease was most common in children, though also met with in adults; in some instances three cases occurred in the same family. The onset was sharp, with chills, pains in back and limbs, and vomiting and diarrhœa; fever rarely a noticeable feature. In some cases there was marked stupor for the first few days.

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Original Articles.

REMINISCENCES OF MEDICAL STUDENT LIFE FIFTY YEARS AGO—IN EDINBURGH.*

BY EDWARD WORTHINGTON, M.D.

"Wake up, Ned; wake up!" This peremptory order eliciting only an impatient response, "Bob" continued with: "Rouse up, man, it is snowing!"

Snow having no peculiar charms for me, at the moment, rousing me, as it did, out of one of "youth's sweet dreams," I was about to turn over, when my tormentor said: "I'll pull you out of bed if you don't wake up"—and suiting the action to the word, there was a pull, and a bounce, and a bundle of humanity mixed with sheets and blankets was fired out into the middle of the floor!

"What did you do that for?" "Didn't I tell you it was snowing?" "Yes; but suppose you did, who cares? I have seen it snow before, and you know it!" "Yes, but evidently you do not know what a fall of snow means in Edinburgh! It is the signal for a jolly good row. Get your breakfast, put some 'grub' in your pocket, and get up to the University, at once—hurry up!" And as he tumbled out of the door he gave me the parting admonition: "Whatever you do, be sure and bring a good stick."

The disturber of my morning slumbers was a fellow-student from Quebec. We had been in many an adventure, and may be said to have "cut our eye teeth" together; he rejoiced in the name of Robert Henry Russell, and in having sweet old Dublin city as a birthplace. Poor fellow, he went to his "*Rest*" not many years ago. The scene was in Salisbury street, the time early in the winter of 1842, and the "meteorological report" of the day—if there had been one—would have read: "*Mostly stormy, with snow.*" I had been in Edinburgh only a few days, having been luxuriating in the delights of a seven-weeks' passage in a timber-laden sailing vessel, from Quebec to Glasgow—fed on coffee, corned beef, and ship-biscuit, varied with *sea-pie* (full of suet and raisins) on Sundays! For this I had paid the modest sum of £7 10*s.*; but as I was the only passenger, and the ship the last of the fleet, the company could well afford to deal out luxuries with a lavish hand.

There were no ocean greyhounds in those days; but on my return in May, 1843, I had the pleasure—for the first time—of seeing in mid-ocean the *smoke* of an ocean steamer miles away in the distance. We had a host of cabin and steerage passengers on our good ship, the *Caledonia*, and every one turned up to see the strange sight, in wonder and doubt—doubt as to the safety of ocean steamers. Even our captain shook his head! Yes, even our own captain shook his head, although he proved to us a few days afterwards that he was a most reckless man to go to sea with. We fell in with another so-called "clipper ship," and in the wind both vessels had to tack. So dangerously near did we come at times that the women screamed, the men looked nervous, and even the sailors scowled. The very devil seemed to have entered into the heads of both captains, the ships running into each other—a collision apparently unavoidable. Neither captain would give way, though the least turn of the wheel on each vessel seemed so easy; but no—both captains preferred to stand at the side and shout out volumes of sea curses at each other—as d—d land-lubbers—so near, as we passed, that they could almost have shaken hands. This crossing and re-crossing each other's bows was continued so long as to be almost sickening—so long that some of the best men among the passengers had made up their minds to do something very desperate, when, fortunately for us, one of our yards carried away the enemy's foresail, and so ended the tournament. After that day every one hated the

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captain and felt that we all owed our lives to the chief mate, under Providence.

Russell had been in Edinburgh for two months, and was consequently well up in the traditions of "*Auld Reekie.*" There were four Canadians of us in Salisbury street that winter—Sir Charles Tupper, at present High Commissioner to Great Britain from Canada; the Honorable Doctor D. McNeil Parker, of Halifax; Russell, and myself.

The belligerent relations which have always flourished at Oxford, Cambridge and Dublin, between "Town" and "Gown," existed also in Edinburgh, in an intensified degree. The only other difference was that the Edinburgh student had no "gown;" he had absolutely refused—always—to wear one. After all, the use of the "gown" in academic warfare was evanescent; it soon became a "cutty sark," or even worse; but it was useful in description, as giving a name to a faction, "Town" *or* "Gown." It was a remnant—a faint reminder of the class distinctions of the feudal times. From time immemorial the feeling of the trades apprentices against the schoolmen was bitter; it was full of "envy, and malice, and all uncharitableness." What right has he to dress better than we do? He is no better than we are! He is to make his living, at his ease, over his dry old books, while we earn ours, like men, by the sweat of our brow. We'll show him that we are as good as he is." To prove the truth of his words, if a baker's apprentice—floury all over—saw a student coming down the street in dark clothes, that baker would cross the street for the pleasure of "brushing up" against [illegible] hereditary foe! Then there was a [illegible] the flour flew, and the "claret" ran [illegible] the apprentice happened to be a [illegible] and the student happened to [illegible] clothes, the light clothes were [illegible] No wonder, then, that a determined to wipe out old scores in [illegible] tunity offered—and a good [illegible] as good an excuse as any.

Some years before—I [illegible] there was a terrible riot in [illegible] were lost. After a three [illegible] "Town" and "Peelers" [illegible] and in addition to the [illegible] the Castle, troops had [illegible] from Glasgow—in coaches—a distance of 45 miles. Meantime the students took possession of the University, provisioned it, mounted two small field pieces in the quadrangle, barricaded the gates, and prepared for a regular siege.

Nearly all—if not all—the professors sided with the students, and in the memorable trial which followed, and in which some of the greatest lawyers at the Scottish bar appeared, it was clearly proved that the students were not the aggressors, that they had been shamefully and brutally treated; and Edinburgh was made to feel that if she did not wish to keep young men from crowding from all parts of the world to her great seats of learning, she must prove that she was prepared to give them reasonable protection. Even the pecuniary interest to the city arising from some 2,000 of an additional population, had to be considered.

When I got up to the University that winter morning, six inches of snow had fallen, the loveliest ever seen for snow-balls—just the amount of moisture necessary to establish cohesion of the particles, and give a black eye if sent with force and precision. The University sidewalk was packed with students. The opposite side of the street was one dense mass, ready for anything that might turn up. Nothing had occurred to provoke this display—nothing but the unruly actio[illegible] elements. S[illegible] had been permit[illegible]ll, and snow [illegible] time-honored a [illegible] for a figh[illegible] incident in D[illegible]k fair! T[illegible] all the w[illegible] to the N[illegible] ed—[illegible]p—and [illegible] e an

[illegible] all o[illegible] t way [illegible] orld [illegible] omni- [illegible] would go [illegible] by would [illegible] scend from [illegible] one in the [illegible] re a "ring" [illegible] ngsters would [illegible] the "Peelers" [illegible] ghly [illegible] by [illegible] the [illegible] ts [illegible] uld [illegible] sticks,

one could not be raised, or if raised could not be brought down again for want of room—it was all elbows and push.

In extending mutual civilities, however, to passing charioteers, a few erratic snow-balls would be sure to hit some distinguished member of the opposition on one side or the other along the line, with such exasperating force that the whole line would advance and lively fighting would follow, until from sheer exhaustion both sides retired to repair damages—to carry off the wounded, apply sticking plaster and raw beef! If an unfortunate "Bobby" interfered, he had to be carried home to his friends. It was like interfering in a little unpleasantness between a man and the wife of his bosom!—the old story repeated,

"Those who in quarrels interpose,
Must often wipe a bloody nose!"

This kind of thing continued, without much variety, the whole day. But

"The shades of night were falling fast,"

and by dark the street had resumed its wonted quiet. There were no dead or mortally wounded; battered hats, torn-off coat-sleeves or shirt-collars, and deep-red stains on the dirty snow, were all that marked that first day's fight.

In Edinburgh there is no such thing as college residence. The students attending the University or the College of Surgeons live anywhere they like, all over the city—"Old" ew" town. On that second day each d up a friend or two, here and there y, until the party got strong enough e in. The snow was falling fast, and clock there was a crowd larger even at of the day before. Special consta- d been sworn in to aid the police, and ecommended to "go round"—so the rs had to make their own excuses for s.

efore noon a grand rush was made Town." Five or six students were ded, and the police made an attempt them off for the police office on High This diversion was not seen for a , but when it was, there was a mighty and a cry from the students went down ont, of "*O'Brien to the rescue!*" Then out dashed the Hero of the war! and quicker than wink, down went before his right and left the two leading policemen. A general charge was made, and in two seconds the captives were passed over our heads amid the cheers of the schools.

Looking back after fifty years, I can see as plainly as if it were yesterday the figure of gay and jaunty O'Brien, as he stepped out like a knight of old to exhibit his prowess before the assembled hosts arrayed for battle.

O'Brien might have been a son of Charley O'Malley's immortal

"Mister O'Brien from Clare,"

or he may have been of the "Round Tower's" O'Briens. Weren't there O'Briens kings and queens in "Owld Ireland"—when kings and queens were as thick as blackberries? That was in the good old days of Home Rule, when everybody was his own "Parliament" and ruled himself—and everybody else, too. But whether of royal extraction or not, our O'Brien was a tower of strength, and a jewel in a fight. It is to be regretted that I cannot give O'Brien's Christian name; but I may be forgiven when I say I do not know if he ever had one. Achilles had none, that I ever heard of, nor had Agamemnon; and after all, what need was there of O'Brien's having one? With the grand old name of O'Brien, what more could a man want? How much farther could his ambition carry him? O'Brien was tall and slight, light of limb and long of arm, jaunty and dude-like in bearing, but when he shot out his right and left, down went his men like nine-pins! In piping times of peace he was a great favorite, as peaceful as a child; but after that day the Edinburgh rough never ventured to rub against his good clothes or tread on his coat-tail.

Late in the afternoon the police did again manage to isolate a few students and run them up to the tolbooth, but before the justices of the court had time to take their seats (it is said they were deliberating in another room on the style of punishment they would inflict) the students packed in in such a dense that by sheer pressure they carried e thing before them, prisoners and all! audacity of the thing!

On that eventful second day I n to grief. I must have got mixe

innocently—with this last crowd, and I never knew exactly how it happened; but Bob and other friends told me of it afterwards. They dragged me through the street, on the broad of my back, from the corner of the High street to the College gates, to prevent, as they said, my falling into the hands of the enemy! And these men called themselves my friends! Save me from such friends! I had heard of applying cold to the head, in certain cases, but this was not one of them! This case was quite different! They had pulled me by the collar of my coat, and by my arms. There must have been a "solution of continuity" in my garments, or perhaps only a loss of buttons; but when we got to the College gates, my legs—no! not exactly my legs—were full of slush, and mud, and melted snow, both of them! And so ended the second day.

The third day told the same old story. The Senatus had called upon the authorities to put down the riot. They represented that this could be done by preventing crowds from assembling and loitering in front of the University, as a perpetual challenge, and that this crowd had no legitimate business there; that on the other hand this was the place where the students did daily and lawfully assemble; that if in going to the College, as his daily custom was, the student was liable to be beaten, and when he got there to be insulted, it was only natural that he should retaliate; that to expect him, as soon as he reached the College gates, to walk in—like a little lamb—and leave his friends outside to take care of themselves, was to expect too much. The Lord Provost promised to "attend to it," but he was rather slow—proverbially slow. About the middle of the day, as nothing appeared to be done, or doing, and as this merry war was getting monotonous, the students formed in solid column across the street, and cleared everything before them down to the High street, just in time to hear the Lord Provost—surrounded by his bailies, all in full feather—reading the Riot Act, while a strong force of Highlanders was in readiness, with fixed bayonets, waiting for the order to "charge." The reading of the Riot Act was just completed as the students came down, the crowd flying before them. The order to "charge" was given, and down came the soldiers. But O'Brien was equal to the emergency. Taking off his cap, and turning to his legions, he shouted: "Open out your ranks!" and "Take your time from me!" The rush of the Highlanders was too impetuous to be stopped in an instant; the students opened out, and the soldiers charged down the middle of the street, O'Brien giving the word "Three cheers for the Queen!" The effect was like magic; even the soldiers could not refrain from a smile, contrary as it was to discipline. Even the enemy cheered, the whole thing was so unexpected. The war was over! and it remained an open question, who deserved the laurel crown—the Lord Provost or O'Brien! That night the officers of the Highland regiment, in a festive moment, declared O'Brien to be "a jolly good fellow."

This Lord Provost was the same who, on the Queen's visit to Edinburgh, was so late in coming to present the silver keys of the Royal City to Her Majesty, according to ancient custom, that when he did arrive at the barrier specially erected and decorated Her Majesty had passed through, taking forcible possession; and the street boys were singing before night a parody connected with another famous episode in Scottish history:

Hey, Jamie Forrest, are ye waukin' yet?

* * * * * * * *

The atrocious murders committed by Burke and Hare in Edinburgh made a sensation as profound as did the "garotting" and Whitechapel murders of recent years. Mothers told the horrid story to their children, and citizens were afraid to venture out alone after dark for fear of being "Burked," as it was called. The popular idea was that these devils destroyed their victims by first clapping an adhesive plaster over the mouth and nose, thus securing suffocation without noise. The murders were committed solely for gain, no spite or malice acting as an incentive or excuse, and the bodies of the victims were sold at the dissecting rooms in Surgeons' Square—a place even in day-time dark, dingy, and dismal. Burke and Hare lived together in a tenement in the Cow-gate. They were both married, and it would appear that the wives knew all about the murderous traffic

in human life. Indeed, it was said that when the husbands brought in a victim—often under the cloak of hospitality—the wives would retire, at a signal, and engage in a noisy quarrel, to drown any noise likely to be made in the terrible game of murder. It is not known how many murders were committed. At first, care was taken to avoid those whose persons might be identified, but after a while success bred carelessness. Then two cases occurred which exposed the whole affair. One was that of a poor old woman who, coming up to Edinburgh in the gloaming, was weary and sore from long travel. She had a son, a soldier, whose regiment had just returned from India and was quartered in Edinburgh Castle. She had sent word to her son that she was coming up to see him, and, old as she was, she made the journey on foot, which took her a couple of days. On the outskirts of the city she inquired her way of a passer-by, to whom she told her story—of how the Castle had been in sight for some time, and how she had been expecting to meet her boy, as she had sent him word when he might expect to see her. This fellow took a lively interest in her, told her it would be impossible to get into the Castle at that hour, but took her bundle and said she must go home with him—his wife would take care of her—and he would walk up to the Castle himself with her in the morning! She never saw her son! but she was seen to enter Burke's house, and was never seen to leave it. Afterwards it appeared that the son had been near the spot where the poor woman met with Burke, where she had been expecting him, and where mother and son had most unfortunately missed each other.

The other case was that of "Daft Jamie," a poor half-witted creature, well known to every one. He was missed for some days, and then his body was recognized in the dissecting-room by the janitors—who gave the information at once. Daft Jamie had been nearly a match for the murderers, as was seen by the bruises on his body—and theirs—and his cries had been distinctly heard by the neighbors. The fullest aid and information was given by the janitors, but the fury of the populace was so intense that they destroyed everything about the place, and then went to Doctor Knox's residence, smashing all before them from garret to cellar, in search of Doctor Knox himself. But Knox had left Edinburgh and crossed the channel!

The murderers had a speedy trial; one turned Queen's evidence, and the other was executed.

In spite of the most searching examination there never appeared anything to connect Doctor Knox or any of his assistants in any way with the affair. The body of Daft Jamie was the only one that showed any marks of violence, and in his case the first whisper of evidence came from Surgeons' Square. It was thought suspicious that Knox should have gone to France, but in Scotland he could not have been saved from the fury of the people. He did come back, however, and for many years afterwards lectured in the same old rooms, to the largest classes of medical students ever assembled together in Great Britain, or indeed in any part of the world. He was, without doubt, the first anatomist of his day. There is not, even now, anywhere among the old men of the profession, one who, having had the opportunity, did not attend Knox's lectures.

Only the other day there died in England a man whose name was known over the world, the friend and the physician of the small and great ones of the earth, who was a favorite pupil of Knox's, and who attended his lectures long after these events—the late Sir Andrew Clark.

Knox was a man of medium height and slight build. He had suffered from smallpox in his youth, which had distinctly marred his beauty and destroyed one of his eyes, leaving an ugly raised cicatrix in the cornea. So sensitive was he about this that he was never seen without glasses, which from long habit he was constantly adjusting with his middle finger and thumb. He had a decidedly turned-up nose, and was bald-headed when I knew him, and he had a curious trick of spasmodically jerking up one shoulder, as if there was an erratic flea somewhere, or as if the laundress had overstarched his collar or shirt. Knox was a most agreeable man in conversation; he always spoke in a mild, persuasive tone, so sweet—and what the Irish would call "soothering"—that one could not help thinking that his tongue had been

moulded out of the sweetest of barley-sugar. Certainly the winding up of his sentences, with a soft, satisfied, half-whispered "Ah yes!" and the adjustment of his glasses, were most effective.

Some lady friends of mine once told me of something apropos of this. They were coming up to Edinburgh in the mail coach. When some ten miles out the coach stopped to pick up a passenger. The moment he sat down they looked at one another in amazement; they had never seen any one so ugly—*ugly* was the word they used. There were other passengers inside, and a lively conversation was going on, into which he modestly entered. After a while the conversation drifted into the Burke and Hare murders, which the stranger seemed to know all about; he spoke freely of everything connected with them, and was, as they said, the most agreeable gentleman they had ever met—they forgot all about his personal appearance, so charmed were they with his manner and conversation. When the coach stopped to let him out, they were sorry to lose him; and as he stepped out, he turned, took off his hat, and presented the ladies with his card: "*Doctor Robert Knox.*"

Occasionally I used to go out to his house at Newington for a rubber of whist. Two maiden sisters, of mature age and large frame—evidently twins—the only persons I ever saw in the house, with the Doctor, made up the table.

Some of my friends used to chaff me about this, saying: "Take care, young man; some of these days you will be turning up on the dissecting-room table;" but I always had faith in woman, and knew that the ancient spinsters would not permit such a thing—no, not for one moment!

In his lectures he often alluded to the time he spent in Paris, and to the *savants* of the Institute, who had unanimously elected him a member; particularly did he refer to St. Hilaire, with whom he had had discussions on the differences and varieties of the human race. After a trip to the Cape of Good Hope, where he had ample opportunity to examine Caffres and Boosmen, he returned jubilant, and stopped in Paris on his return. His researches were so convincing that St. Hilaire said: "Oui, mon chere Knox, I am satisfied. Your views are conclusive." In giving this to the class he would say, adjusting his spectacles: "Yes, St. Hilaire did me the honor to say I was right"—then add in a voice hardly above a whisper, "Ah, yes!"

One evening an Irishman went to the residence of Doctor Knox and asked to see the master alone. At the interview he had a "subject" to sell. The Doctor told him to go about his business, to go to Surgeons' Square. "No, your honor," said Pat, "I won't go there alone at this time o' night. Me owld aunt died on me hands, and I haven't a copper to give her a dacent berrial, and the childer are crying for bread, and the missis has just had an increase! and," added Pat, "she's at the door this minute, an' I'll bring her in and show her to you!" "No, no," said Knox; "take her to Surgeons' Square, with this note, ring the bell, and give this to the janitor." The note was an order for ten guineas, the price demanded. The bag was not opened until the next day, when it was found to contain a pig that had died of the measles—beautifully padded about with straw! Often and often after this, in the lecture room, as Knox turned round to illustrate something on the black-board, he would see the words "Who bought Paddy's pig?" His simple rejoinder, as he took the duster in his hand to rub out the words, would be, "Ah, yes!"

* * * * * * * * *

The relations between the Edinburgh student, the lecturers in the schools, and the medical staff of the Royal Infirmary, were always of the most friendly character; the teaching was not confined to the lecture room, but was carried into social life.

Imagine one of the great men meeting a student in the street, taking him by the arm, inquiring into his views on certain theories, or on cases of hospital practice, and all so kindly, as if seeking instruction himself—giving his views modestly and drawing the other out. It made the youngster think something of himself. One man remarkable for this courtesy was Christison. When a student he had been "plucked" on medical jurisprudence; and as he wandered about the gates, broken-hearted, one of the examiners coming out took him by the arm, saying:

"Come, Robert, come along and have dinner with me." "No, I won't; I'm going to read my Jurisprudence." The Professor repeated "Robert" so reproachfully that the lad burst into tears, apologized, and went to dinner. He did read up his subject—so effectually that he became Professor of Medical Jurisprudence in the University, and the greatest authority of his day on poisons! Sir Robert Christison! and he always spoke of that kind sympathy of his teacher as what had saved him.

* * * * * * * * *

I think I had the questionable honor of being the first Canadian who ever appeared in Edinburgh—in the streets—in snow-shoe costume.

I was going out to dinner. There was a regular old-fashioned Scotch mist. I had no mackintosh, and I despised an umbrella. So I put on an old snow-shoe "capôt" that I had worn on the voyage. It was seamed with red piping, decorated with epaulettes, and had the orthodox "capuchon." Then I had round my waist a brilliant "ceinture fleché." A stunning turnout it was, too, but a Quebec boy would not have looked at it—to him it would have been an old coat, an old story; not so, however, with his Edinburgh contemporary. From the moment I left my lodgings I became an object of interest to the street boys—painfully so. The wretches danced fantastically in front of me, snapping their fingers like castanets, and making hideous faces, while the big ones urged them on. All sorts of tender inquiries were made as to the extent of knowledge my "mither" had of my wanderings. Their interest in me was flattering, but most embarrassing. I wanted to turn and run for home, but the little devils could run faster than I could. What a fool I had been! How I longed for a "lodge in some vast wilderness, some boundless contiguity of shade"—not a wet street, bounded by jeering roughs that threatened every moment to pounce upon me. What would I not have given for a sight of O'Brien's friendly face, or even the negative protection of a policeman? But no policeman was to be seen; he was "sparking" with some pretty housemaid. I would gladly have changed places with him, and given "boot." What could I do but "move on" and "look pleasant?" All the way from Patrick square in the Old to George square in the New town! Would I ever—or never—get there? When I did reach my destination, and urgently knocked for admission, the servant—what with the howling mob outside and my peculiar "get-up"—thought I must be either a mountebank or an escaped lunatic.

Such a shout of laughter as I was received with in the hall! I was turned round, and inspected, and congratulated, by the whole family, and I had to assure them again and again that this was not the ordinary street costume in Canada! However, it was the first and last time I appeared in it in Edinburgh, in the street.

Little did I then think that one of the sons of the house—present that evening—would be in this year of our Lord 1894 His Grace the Lord Archbishop of York!

Sherbrooke, P. Q.

ON THE EARLY SYMPTOMS OF MENTAL DISTURBANCE.

BY DOCTOR C. WERNER.

The diagnosis of certain mental diseases is not always easy—on the contrary, is often attended with great difficulties even for the expert. Such a condition of things, however, is not to be marveled at, so long as psychiatry has no part in the medical examination of the State—an omission which has been repeatedly animadverted upon, and which was alluded to with some asperity at the last session of the Society of German Alienists at Frankfort-on-the-Main. But if we pause to reflect how far-reaching may be the consequences of such an ignoring of, or failure to recognize, morbid mental conditions—that as a result of early and correct recognition, a psychosis might be completely cured by expert treatment, and that the relatives, at all events, might be spared an immense deal of trouble and grief—it will be seen that I am not unjustified in here expatiating on the earliest and usually less perceptible symptoms of the most common forms of mental disease—melancholia, mania, paranoia, and dementia paralytica.

In *melancholia*, one of the first symptoms—and one which is usually invisible and apparently unimportant - is sleeplessness. Such

individuals seek in the beginning to divert themselves in every possible way during the daytime, and attend to their wonted occupations with apparent zeal; then they go to bed, earlier or later, and lie for hours tossing restlessly from place to place, without sleeping, or dozing lightly, and awaking spontaneously or on the slightest external provocation; to this is gradually added a certain feeling of pensiveness, general depression and anxiety, with inability to account for the sadness and dread. Further on they neglect their business and find no more satisfaction in the customary daily tasks; seem languid and indolent, and the slightest provocation moves them to tears. At times—and by no means in the fewest cases—an unaccountable irritability is manifested at the very outset, followed immediately by a corresponding depression of spirits. Disturbances of appetite make their appearance; and from all these modifications, of which such patients are perfectly conscious and which they usually exaggerate, they conclude that they are afflicted with some subtle, incurable disease, and with this sad thought constantly torment themselves and others. In the further course of the malady, præcordial anxiety supervenes, and definite morbid ideas are developed, among which there may be sensual delusions. The psychic disturbance may then be distinctly recognized, and the diagnosis of melancholia no longer admits of doubt.

The initial stage of mania is usually, likewise, one of depression. Here, too, we find the same initial symptoms—sleeplessness, irritability, repugnance to labor, self-reproach, etc., and not infrequently we are unable to determine *ab ovo* what kind of a mental disturbance will yet develop. There is strong ground for suspecting mania when patients, exhibiting the foregoing modifications, suddenly begin to present the very opposite symptoms. Instead of the previous wailing and complaining, there is an augmented self-consciousness; the enjoyment and love of life apparently return; cheerfulness and wanton humor are now the order of the day, and the subject cannot say enough in praise of his excellent bodily health, almost boring his family or companions. The inclination to labor is now exaggerated, but the actual work accomplished is very slight; there is a superabundance of words, but the promised deeds remain undone or begin to grow superficial, becoming finally senseless and absurd. The frugal man makes all sorts of purchases, in a measure turns the whole household topsy-turvy; disposes of objects which were before dear and precious to him, or exchanges them for worthless trifles. Another takes delight in bad verses which he declaims to every listener, or in dubious speeches, poor jokes, indecent gestures and movements. There is no more sorrow and care; they would drink deep draughts from the cup of life's pleasures, and impetuously seek to carry out their purpose in a manner which often provokes laughter. As soon, however, as anyone ventures to clarify their confused ideas and notions, the gayety and good humor are at once transformed into anger and vexation, and deeds of violence without regard to the person are not so rare in this somewhat advanced stage of mania. At this point, commonly, the morbid condition is correctly perceived.

The acute forms of *paranoia* generally supervene with great rapidity, and are to be recognized, as a rule, without difficulty by the excessive number of sensual delusions in almost every respect (in the form of hallucinations), by countless insane ideas of persecution and injury, also of self-exaltation, by the unconcealed mistrust of everyone, even of the sufferer's best friend, and by the great irritability and restiveness which result in the most striking and ridiculous performances and speeches.

It is different with the chronic forms, whose course is very slow, often latent, and at times dates back to earliest youth. Such a diseased individual proves to have been even as a child quiet, dreamy, sensitive, reserved, though not unintelligent. Instead of playing with other children, he secludes himself; if possible, hides behind a hedge to spy and eavesdrop; the need of friendship, the social sense, the need of discussing private affairs with others, are not at all or very slightly developed; instead, mistrust is early begotten in the character, and a morbid passion for brooding over trifles. With the passing years these "peculiarities" grow; the individual becomes soured and incapable of enjoying

life. Hence such people are commonly avoided, or ridiculed in private. We wonder over their occasional unprovoked outbreaks of anger, and begin to observe carefully for the first time only when they betray long-concealed perverted fancies and notions by striking gestures, sudden and loud laughter, and the like, giving concern to their friends lest they be possessed by no mere "peculiarities" but are rather the victims of a positive mental disturbance. These grounds for suspicion are confirmed here and there when the patient begins to ask abrupt and peculiar questions for the purpose of gaining light on subjects over which he has been brooding, but which are naturally incomprehensible to others who do not grasp the subtle inner connection. From now on, the further complex of symptoms may be twofold: fully conscious that they have betrayed themselves, such patients either conceal altogether their sly combinations and intricate deductions, and carry out their resolution for such a time and with so much consistency and skill as to again deceive friends or relatives and give the impression of mental soundness, never disturbed until they unmask in an unguarded moment; or, when they begin to feel confident of themselves, or weary of the secrecy and anxious to serve the world by revealing their thoughts, they straightway express their views without concealment, and thus indicate that they have been diseased for years and should have been withdrawn from human society long ago in their own interest and for the sake of others. A mass of persecution-fancies, with which are associated, sooner or later, ideas of personal greatness with or without delusions of sense, form the substance of their insane conceptions. To this category belong those unhappy beings who suffer from the so-called querulous insanity (Paranoia querulantium), and who remain in prison for years, or consume house and home in litigation, ere they are found to be mentally diseased. The disease develops very slowly, usually as a sequel to an unfortunate law-suit; hence a real injury may give rise to the insanity. The querulous maniac whose character has always been one of pronounced egoism and unbearable would-be infallibility, considers himself henceforth dishonored; begins one law-suit after another without reflection, without clear objective judgment of the case, simply giving way to the delusion that his rights have been violated and he is in duty bound to vindicate them at any cost of energy and litigation. He becomes very irritable. Despite considerate admonition from his friends, that he may be construing the facts in a false, partisan light and in his own favor, he refuses to believe that others may be even once in the right and he in the wrong. In his great self-exaltation, the subject considers it impossible, unheard-of, for a human being to suffer such wrong and yet be deceived. In such a case, what is more natural than the assumption that foul play is at work, that bribery or false representations have prevailed on the judge to condemn his cause, and that it is accordingly his duty to obtain justice in any other manner possible! Without thought of the consequences, without reflecting that the welfare of his family, the honor of the entire house, may suffer, he now proceeds to write all manner of letters, some of which bristle with insults; begins one lawsuit after another, carries them to the court of last resort, and despite disastrous failure can yet not be convinced of his error. In his morbid moods he insults the officers of the government, even affirming things which he disclaims at the very next occasion; involves himself in the most embarrassing contradictions; considers no means unworthy if he can only unmask and undo his supposed enemies, and regards as violence and outrageous injustice the most considerate reprimand. Under such circumstances it is quite remarkable to observe the knowledge of legal provisions exhibited by people of most inferior education. Years ago I made the acquaintance of an illiterate woman—a querulant maniac—who had been repeatedly punished, and who had thus acquired an excellent insight into the modes of legal procedures dealing with notes and drafts. On this account, and for the reason, further, that their power of quick conception and their excellent memories cause them to appear not unintelligent, and since in their general intercourse with the laity they exhibit no mental abnormality, these patients are recognized very late and are found to be insane only after reputation and honor have suf-

fered—after house and property have been uselessly squandered.

In the foregoing I have purposely furnished an excess of detail and have exceeded the limits of my theme in portraying symptoms which in reality are not to be regarded as early or premonitory, but which, as a rule, are incorrectly judged and are not deemed morbid.

Finally, we now reach the *dementia paralytica*, which exhibits such manifold and varying phenomena, especially in its initial symptoms, that I must limit myself to the most important. As a rule, somatic complaints and troubles prevail at the beginning of the disease. The individuals in question experience all manner of pain in the members which, judging from their account, are in part rheumatic, in part neuralgic. A sensation of oppressive weight in the head, never before perceived, with slight and transient dizziness, gives rise to the fear that a dangerous disease is preparing its onset, and renders the subject moody, discontented, and irritable. Not seldom slight motoric symptoms manifest themselves early: the tongue becomes heavy; certain words are, so to speak, thrust from the mouth; every now and then the patient fails to articulate; and these symptoms, as a rule, disappear as rapidly as they manifest themselves. With these are associated sleeplessness, loss of appetite, constipation—symptoms which still further depress the spirits of such people, diminishing the inclination for work and increasing the consciousness of disease. Thus years may pass by. Baths, change of air, hydropathic treatment, are all essayed; temporary improvement is occasionally felt, without however accomplishing, or causing the patient to feel subjectively, a complete cure. Progressing further, the psychic disturbances become more manifest. The patients become enraged without provocation, are highly irritated on the slightest ground; on the other hand, they remain cool and calm on occasions when the opposite would be more reasonably expected. They may even behave with apathy in matters which concern closely themselves or their nearest relatives (for example, in cases of disease or death in the family, business disasters, insults, etc.). In this stage such individuals are utterly unaccountable, and remain a complete enigma to their friends or relatives—who never think of mental disease, but have been led to notice the complete transformation of character and conduct in the unfortunate subjects and the direct contrast between their present and past eccentricities. The moderate and continent man now enters on a course of extravagance; in his state of exalted sexual irritability he takes pleasure in ambiguous speeches or in immoral actions; he visits drinking-places previously avoided; becomes intimate with people who are beneath him in education and social position. The economical man now begins to spend his money needlessly; stands treat for others who are entire strangers to him, or else makes the most foolish kind of purchases, and the like. Disagreeable experiences of every sort soon follow: words, rows and insults occur—frequently legal punishments—without, however, modifying the subsequent conduct of such patients. Without thought or concern whether they inflict injury upon themselves and their kin, they go from one folly to another, and exhibit a childish glee when they accomplish something excellent or achieve what they consider as a good joke. As a rule, it is now possible to detect in all such actions and expressions a retrogression of intelligence, a distinct weakness of intellect, and this characteristic distinguishes such patients unmistakably from others, especially from maniacs, whose schemes and conceptions of greatness by no means partake of the colossal which is so prominent a factor in the morbid fancies of the paralytic insane. The augmenting intellectual decay (followed usually by physical break-down), joined with distinct motoric symptoms (pupillary difference, disturbances of speech, facial pareses, etc.), and with the apoplectiform paroxysms which supervene at a relatively early date, then permit a ready diagnosis of the severe brain-disease.

What, now, is the most desirable treatment for all these psychoses in their earliest stages?

With respect to melancholia and mania, prompt transfer of the subject to an insane asylum cannot too soon be recommended. The very removal from domestic surroundings, from the wonted environment, and the subjection of the patient to a regular régime

involving constant inspection and medical supervision, has a remarkably favorable action on the subsequent course of such diseases. Even when the domestic conditions are the very best and medical aid is ever so accessible, it will yet be impossible to bring about such a control as may be secured, to the patient's advantage, in a well governed institution. A certain consideration for the patient and for other members of the family (visits, for example) cannot always be avoided at home, however much it may be restricted, and this may undo not a little of the physician's care.

The same is true of the acute forms of paranoia: the asylum is the proper place for treatment. It is my conviction that if such patients were entrusted to the care of alienists as soon as possible—at all events, sooner than is now customary—the percentage of cures would be considerably larger, and in a pecuniary respect the patient would be the gainer. Under all circumstances, however, I disapprove of medicamental intervention in all of the foregoing forms, unless the administration of medicine can be very carefully controlled by the physician from day to day. The most harmless remedy—and, as a rule, the great host of hypnotics and calmatives are not so innocent, and small doses are of little service in mental disease—demands constant medical supervision of its action. The varying disposition of individuals may be so affected by the medicine as to produce great anxiety and enforce speedy intervention on the part of the physician.

With respect to the chronic forms of paranoia, a transient improvement may be obtained in individual cases by change of air, hydropathic treatment, baths of all sorts, particularly by removal from the accustomed sphere of business or family life. With such patients, the insane asylum is to be recommended only when they begin to become a burden or menace to the community, or when the conditions at the home are such as to exclude care and supervision, to say nothing of a bath- or air-cure (change of scene).

This treatment I would also recommend for the beginning of a paralysis, admonishing as to the necessity for rigid supervision, first and ever. The disease manifests itself early in most instances, in the form of extravagances and perversities of every sort, giving rise to self-injury or to endless vexation and mischief to the patient's companions or attendants.

ROUND WORMS.

BY DOCTOR G. R. CRUICKSHANK.

"Doctor, don't you think he has worms?" asks the anxious mother. The case has been carefully studied and is being well treated, but Mrs. Grundy has been in and almost demolished all confidence in the physician. How often this happens!

Recently at a clinic in a neighboring city a boy was presented complaining of worms. Although there was no conclusive evidence of such, the professor prescribed santonin. A week later the woman presented the boy again, with the remark that the powders were "no good," the boy "did not pass any worms." The professor replied: "When he eats beefsteak does he pass beefsteak? The worms come away all cut up." He afterwards explained to the class that this was the easiest way of satisfying the mother.

In making some trite observations about worms I desire to urge:

That a fiction so gross and so absurd should never be indulged in by a physician:

That there is no reliable symptom or set of symptoms but the appearance of the worm or its ova:

That santonin is a poison, in general useless therapeutically except as a vermicide, and should never be prescribed until the diagnosis is absolute.

The commonest parasitic nematoid is the *Ascaris vermicularis*, a worm that rarely affects children until they are able to walk, and occurs most frequently between the ages of three and ten; it is most common among those who drink surface well-water or are possessed of filthy habits. Negroes of all ages in the Southern States are hosts for these unwelcome guests. The life-history of the *Ascaris* has been a matter of considerable doubt and uncertainty until quite recently. Several German investigators swallowed large numbers of ova, and gave them to children, without obtaining a single specimen, but more recent experiments induced

more successful results. Grassi gave a pill containing one hundred and fifty ova to a boy aged seven years, and two months later one hundred and forty-three worms were voided, the boy meanwhile manifesting no untoward or abnormal symptoms whatever.

The ovum of *Ascaris*, after remaining for years in the soil, may be washed into a well, and then, when swallowed, rapidly mature.

The means of prevention are evident: The filtration of suspicious water; cleanliness, especially of fingers and nails. Clean sand should be provided for children to play with, and they should be warned not to taste mud pies. Some gardeners are in the habit of pouring fluids drained off excrement over growing plants, such as lettuce and onions, hence these should always be carefully washed before being employed as food.

As a matter of fact, round worms *per se* give rise to no trouble whatever, but only aggravate symptoms arising from other causes. It is conceded that worms may cause obstruction or crawl into the bile-duct, etc., but instances of this kind are marvelously rare; they usually attain these positions after the death of the host. Genuine instances of death from worms are exceedingly uncommon—indeed, so much so as to be generally doubted save by the vulgar and ignorant. If the symptoms are those of digestive disturbance, the worms make these symptoms more severe. Perhaps if a child is bordering upon an attack of chorea or convulsions the attack may be precipitated, but these are not symptoms of worms. There is absolutely only one positive proof of the presence of the parasites, and that is the occurrence of the creatures or their ova in the fæces. Even the voiding of a worm itself is not such good evidence as the ova, for it may be the last one, while, after a course of santonin, eggs in the fæces may still show the presence of worms.

A mature female ascarid contains over 62,000,000 eggs, and if these required a year to be extruded there would be every day at least 160,000 as the product of this one parasite.

Under a low power of the microscope the ova are easily found; they are elliptical in shape and about $\frac{1}{330}$ inch in diameter. It is no harder for a patient to send a small specimen of fæces to one's office than it is to send a bottle of urine; and, as before remarked, the diagnosis must rest upon the voiding of the parasite itself or the ova. This is a fact universally recognized and almost universally neglected. I will venture to predict that empiricism will take its last stand upon "worms."

Santonin, aside from worms, and perhaps as an emmenagogue—as has been recently claimed,—is not only useless, but in the main pernicious. In small doses it interferes with vision, making everything appear blue, then yellow; it is eliminated as a soda salt in the urine, coloring it when acid, yellow, when alkaline, red; moderate doses increase the flow of urine, and in some cases cause incontinence; large doses cause paralysis of the cerebrum, followed by stimulation of the medulla, producing convulsions—perhaps death—with paralysis of respiration. The first case of convulsions I ever saw occurred after the child had eaten a dozen "worm lozenges."

When ronnd worms require attention at all, it is when complicating some other pathological condition. This should be carefully sought out and appropriately treated. Faults of digestion should be attended to, and the quality, quantity and cooking of food, including regularity of meals, carefully looked after. The habit of "piecing" is at the bottom of no inconsiderable number of the troubles of childhood.

The distinction should be made between vermifuge and vermicide. As a vermi*cide*—that is, for killing the worms—santonin is perhaps unsurpassed, but it should always be combined with or followed by a vermifuge—something to expel the parasite. The character of the accompanying symptoms should in each case decide what is to be the combination.—Santonin suspended in castor oil or followed by it is very effective; two to five grains combined with one to two grains of calomel is a common combination; three doses in one week are sufficient. After a lapse of ten days, if ova can be found in the fæces the course should be repeated. When santonin is badly borne, thymol in large doses answers an excellent purpose.

Oxyuris vermicularis is not quite so common as the *Ascaris*. What has been said of the symptoms of the latter applies largely to the former, except that with the thread-worm itching of the anus is usually present and the surrounding parts are often in an inflamed and catarrhal condition.

If a suspected case be examined carefully shortly after the patient goes to bed, the worms themselves may be seen moving about at the anus; but the diagnosis is more surely made by examination of the fæces with a microscope; ova, plano-convex, $\frac{1}{500}$ to $\frac{1}{1000}$ inch in diameter, will appear in hundreds.

As to prevention, the same means should be adopted as are mentioned for *Ascaris*, with particular care as to the finger-nails, for the ova of *Oxyuris* cannot mature till they are swallowed again; and Doctor Ransom claims that if necessary precautions were taken against re-infection, a patient would get well in a few weeks without treatment. A good plan to keep children from biting their nails is to frequently dip their fingers in a solution of quassia.

The treatment of thread-worms is more difficult than that of round worms, for their habitat, the cœcum, is so far from the stomach that medication by the mouth is of little value, and so far from the anus that rectal injections may fail to reach them. There is nothing better than pure water, warm or cold, to destroy these parasites;* in water they swell up and burst. While the patient is in the knee-chest position a copious injection should be given through a large catheter or rectal tube, and this should be repeated once or twice a week—at the same time an aperient action of the bowels being maintained by castor oil, rhubarb, magnesia sulphate, etc., and tonics such as iron and nux vomica administered.

Itching of the anus and perineum is best relieved by ammoniated mercurial ointment. The fæces should be examined at intervals to make sure of the absence of ova and the completeness of the cure.

Windsor, Ontario.

[* An injection of infusion of quassia is almost instantaneous in affording relief.—ED.]

THE TREATMENT OF SCARLET FEVER.*

BY D. E. BROOKE, M.D.

It should be borne in mind that scarlet fever cannot be shortened or aborted, and that expectant and symptomatic methods of treatment yield the best results.

Agents such as carbolic acid, salicylic acid, permanganate of potash, etc., which are most highly esteemed as disinfectants, cannot be safely employed to antagonize the poison in the system, as the doses required would very seriously impair nutrition and the molecular action of the tissues.

Isolation, confinement in bed in a properly heated and ventilated room, a simple or fluid diet, and proper care of the bowels, constitute in many cases all the treatment needed.

I have always kept my patients in the same room until after desquamation, and in bed until the cessation of fever and eruption; have kept the temperature of the room as nearly as possible at 60° F. during the eruptive and febrile stage, and between 70° and 75° F. during the desquamative stage when the patients have been allowed to leave their bed for some hours, the room being well ventilated without exposing patient to draughts.

The person of the patient should be kept clean, and the bed-linen changed daily. If constipation exists, an enema or some mild aperient may be given. Vomiting if persistent may be overcome by cracked ice, or lime-water either alone or with milk, given in varying proportions at short intervals—it is most apt to prove beneficial in small quantities. When restlessness and sleeplessness are present, bromide of potassium proves serviceable; convulsions, particularly in the early stage, may be overcome by it or other bromides.

The fever is the most constant symptom demanding treatment; and I believe the patient should be allowed to drink water in reasonable quantity. With two patients in whom the temperature went above 104° F. I adopted the cold-water system, and for the first day or so sponged the patients myself with water at a temperature of 50° F., and thereafter every two hours, until the heat of the body was reduced. I found this to work

* Read before the Windsor, Ont., Medical Association.

admirably, and it was not at all disagreeable to the sufferer. In some instances I employ equal parts of water and whiskey, brandy, or alcohol, which, evaporating more rapidly, cools the surface, and at times I find it advisable to use a fan to facilitate evaporation. Quinine is a very valuable drug in all grades of fever demanding energetic treatment, and may be given at short or long intervals in such doses as the age of the patient and the range of the temperature will suggest.

For the pharyngitis I employ tincture muriate of iron and potassium chlorate, also quinine and sulphocarbolate of soda; likewise insufflations of pulverized sulphur; and if tongue is very dry, with parched condition of the mouth and throat, I allow ice in lumps dissolved on the tongue, and iced drinks such as lemonade, barley-water, etc. In the severer and graver forms spraying often will prove most effective. A spray composed of chlorate of potassium, muriate tincture of iron, glycerin and water, or of chlorate of potassium, carbolic acid, glycerin and water, I have found very serviceable.—It is necessary to repeat the spraying every one, two or three hours according to the condition of the throat.

The internal administration of muriate tincture of iron and potassium chlorate I have found of great value in very many cases, but the potassium should not be pushed too far or given in too large doses, since it is apt to produce an injurious effect upon the kidneys. For severe tonsillitis I have found tincture of iodine, applied to the tonsils every day or two, of material benefit; also that ammonia liniment with tincture of opium applied externally is often very serviceable in relieving pain.

If the eruption produces much irritation, sponging with tepid water affords a great deal of relief; or some inunction may be employed. Some years ago anointing the body daily with leaf lard was advised, and though I have employed this, I prefer either pure glycerin or carbolated vaselin—the latter is equally as effective to relieve smarting and itching.

The renal affection is often more dangerous than the scarlet fever *per se*. Here diaphoretic and purgative remedies are required. The diaphoretics which appear to be most beneficial are citrate of potash, and acetate of ammonia and potash, and spirit of nitric ether; diaphoresis may also be promoted by hot, dry or moist air. In the scarlatinal nephritis of young children, and in adults, the infusion of digitalis with acetate of potash is often very useful. For older and more robust children with scarlatina, anæmia and serous effusions, I have obtained a great deal of relief by the use of the fluid magnesia, cathartics being more certain in their effects than either diuretics or diaphoretics.

If there is much otitis, and the child of a strumous diathesis, cod-liver oil and syrup of iron iodide answer the purpose of a good tonic. Where there is much aural discharge, an injection of carbolic acid one-half drachm, glycerin two ounces, and water four ounces, is a very good mixture.

I usually order the clothing which the patient wore, and bed-clothing when changed, to be soaked two or three hours in a tub containing carbolic acid one ounce, zinc sulphate eight ounces, water three gallons, and afterwards taken out and boiled.

During convalescence I invariably issue strict injunctions against the patient taking cold, forbidding the least excursion into the open air until one month after the fever.

Windsor, Ontario.

A FRENCH LEGAL DECISION.

A curious case of illegal practice is reported from the small town of Sarrao, in France. A woman was dying in advanced pregnancy, when the priest who was present persuaded a layman to perform Cæsarean section in order that he might baptize the child. The authorities, considering the practice to be illegal, proceeded against the operator, who was proved guilty of practicing medicine without a qualification, and was heavily fined.—*Exeter Review.*

WORTH REMEMBERING.

Michael Foster is accredited with the utterance that two hours of severe mental labor abstracts as much vital strength from the economy as a whole day of physical labor.

Correspondence.

THE CUT-RATE DOCTOR.

"How dost thou like the picture?"

The name of the cut-rate doctor is legion. He is not peculiar to any particular locality or school of practice. He may be found in the large cities, the small village, and even in the rural districts, from the Canada line to the Gulf coast, from the Atlantic seaboard to the shores of the Pacific—wherever there is competition. He may style himself Regular, Homœopath, Eclectic, or whatever he thinks will attract the most patronage. The name means nothing to him; he is after money.

He may be too ignorant to properly spell the names of the diseases he essays to treat, or he may be one who has been taught much and learned but little: sort of an illegitimate offspring of some respectable college—begotten by the "father of lies" and nourished by a too credulous public—a disgrace to his *alma mater* and a curse to his nurse.

Like his *confrère* of the pestle and mortar, the cut-rate druggist, he possesses a soft and insinuating manner: soft as a cat's paw, and equally treacherous.

As a rule, he is a man of mediocre skill—at his highest possible correct valuation—who has failed in obtaining a living practice by honorable means, if he has ever tried them. This is emphatically *not* the impression that he wishes to create among the people, but it *must* be his own opinion, as his offering his services for less than the regular fee is a tacit admission that he thinks them worth less than those of his fellows.

He is always very solicitous regarding the welfare of his friends and acquaintances—so solicitous, in fact, that he often makes them friendly (?) and unsolicited visits when they are under the treatment of other physicians. At such times he does not propose to criticise the treatment of the other gentleman. Oh, no; but *he* has had quite a number of similar cases that made rapid recoveries, while the gentleman in charge has lost several that were much milder.

If the said gentleman has been unfortunate in any case of late, or if there is any scandal in circulation to his discredit, the matter is brought into the conversation. He will probably say that "Doctor —— is certainly a good physician in *ordinary* cases, but sadly behind the times." He is afraid that the Doctor don't read enough to keep up with the rapid march of science. If possible he examines the medicine that the patient is taking, turns up his nose, "hems and haws," and labors to create the impression that he could say much if persuaded. As a rule, he *is* persuaded, and invariably yields, with seeming reluctance, and as invariably condemns the treatment as unsuitable and absolutely dangerous. "This case is rather different from the usual type of the disease," he explains, "and has some features that I think the Doctor don't quite understand;" and then he relates a story about a case just like it that made a rapid recovery in his hands, after having been brought to the verge of death by the treatment of some other physician.

Probably he gets the case, to the exclusion of the former attendant. If he fails in this he usually succeeds in creating a distrust of the regular attendant, and persuades the family to secretly make some alteration in the treatment prescribed.

If the patient dies, "it is no more than could be expected under *such* treatment;" if he recovers, "it was entirely due to the *alterations" he* suggested. He deals largely in futures; *somebody* will believe him, and when another case of illness occurs in the same family it is *he* that is generally called. At all events he has given the gossips something upon which to found a story detrimental to the other physician's reputation—and he looks for this to yield him good fruit in time.

The cases of this pariah are *always* of a very severe type, while those of the other physicians in his locality, he claims, are simply mild and insignificant. When any of their patients die he is much astonished that they should have lost "such a mild case," but when a death occurs in his practice he has the advantage of having told the friends of the patient how "very bad" the case was—an advantage that ensures him much prestige if the patient recovers.

Tonsillitis with him is diphtheria, and all mild cases assume a grave form if he is treating them. Unfortunately *this* is too often the truth.

The cut-rate doctor is the firm friend and ally of the gossips and scandal-mongers—they all swear by him. This is precisely what he desires, for he counts upon them to aid him by spreading false and injurious stories about his rivals, which he is afraid to circulate himself.

He is very assiduous in his attentions, often visiting his patients long after they are convalescent. When he makes a visit he somehow manages to *take in* the whole neighborhood, or as much of it as he can. Being cheap and "so friendly," his attentions

are often permitted when those of another and better physician would be objected to.

He generally charges for all the visits he makes, and is not above charging for one or two more at times. If this is detected, he claims that it was due to his inability to make out his bills himself on account of so much business, and he transfers the overcharge to the account of some one else who is good pay. He rarely forces his collections, but prefers that his patients should pay him at such times and in such sums as best suit their convenience. This may *seem* convenient but generally *proves* to be very expensive, like purchasing goods on the instalment plan. A settlement in full is something he strives to avoid, as he believes a running account gives him a hold upon a family which secures him their patronage.

Unless he is a "Homo" he rarely dispenses his own medicines—he claims that lack of time (perhaps lack of skill) prevents him from doing so. He rather affects writing large and expensive prescriptions to be taken in copious or frequent doses, and prescribing new preparations and rare drugs. The former secures him the friendship of the druggist; the latter excites the admiration of his patient because *his* doctor knows how to use medicines not commonly employed by the others. Perhaps a remedy *specially procured* for the patient may be more efficacious at times—if not, it is certainly something to *talk about*—and the doctor gets some benefit from the talk if the patient derives none from the drug.

When possible he sends his prescriptions to some pharmacist who will allow him a liberal commission; sometimes he takes them there himself "to see that they are properly prepared" *and accredited.*

He likes to write prescriptions—will frequently do it gratuitously, and make it pay too, as he writes for such compounds as will pay him a large percentage; and, as he uses a prescription blank of some peculiar color or design, the large number seen upon the druggist's prescription file when it is *accidentally* exhibited before a customer adds considerable to his popularity.

He rarely favors the cut-rate druggist—they are too much alike in their methods to agree well. He prefers to frequent the pharmacies that the best physicians patronize, and get all the prestige he can from such occasional contact. If he has ever met some prominent physician or noted specialist, he claims to be intimate with them, and brings their names into conversation as often as possible. If he has been the member of the clinic of such specialist, he claims to have been his assistant after his graduation—was, in fact, requested to become his partner, but was unable to do so on account of private reasons. If he takes or sends some patient to a hospital, he either pretends to have assisted at the operation or claims that it was performed *as he advised.* Take it altogether, he is a wonderful man *when he tells the story himself;* and when one hears him recount the wonderful operations he has performed (in his mind) and the miraculous cures he has made, "the wonder stronger and stronger grows that one small head should contain all he knows," and is inclined to believe his statement that only professional jealousy prevented him from holding some lucrative professorship in a prominent college.

Being so oily in his speech, he is apt to have a tongue that works freely—so much so that, in speaking of his cases, he would rather tell his patients' secrets than to lose any opportunity of receiving full credit for having a large practice.

The cut-rate doctor is rarely found taking an active part in any of the public movements of his locality; and when an epidemic occurs which calls for hard work and self-sacrifice, and promises but little compensation—most emphatically he is not in it.

As a rule, he is not strong in church matters. He probably discusses religion freely with those who like the topic, and *agrees with them;* but he rarely joins the church. Perhaps he intends to do so before long; is unable to give the matter his undivided attention at present; is carefully thinking the matter over before making his selection, or is waiting to have some point that has perplexed him fully explained; but the fact is that he fears that joining one church may cost him the patronage of the other congregations. He generally belongs to all the fraternal societies that he can gain admission to—particularly those that have a medical officer—*and he works his connection for every dollar there is in it.*

Unlike his congener of the pestle and mortar—who, apart from matters strictly within the limits of his business, may be a good fellow and a valuable citizen—the cut-rate doctor is so thoroughly selfish and supremely egotistical that he is of but little use to anybody else. He is for self only—first, last, and all the time. He is ever on the alert to seize the elusive dollar, and is not *very* particular as to how he makes the seizure. He usually can be hired to do anything, legal or illegal, if it is not *too* risky, and his price is not very high either. In fact, he is so dishonest and untruthful in his methods that

M.D. attached to his name might well be supposed to mean *mendex damnatus.*

If you call at his office you will rarely find him; "he is out visiting his patients," you are told. This may be true, but if you trace him it is an equal chance that you either find him upon the street lying in wait (or waiting to lie) or else loitering in some place of business. This, he thinks, is more likely to create the impression that he is "very busy" than if he was to be found much at home, and it gives more people the chance of seeing him.

Occasionally he has a partner—a respectable practitioner—generally one who is known to be incompetent in some department or direction. This partnership is secret and somewhat peculiar: their offices are not in the same building, and they pretend to be strongly opposed to each other, but they consult together in all cases where they can make a plausible excuse for it. The respectable (?) member of the firm recommends the other in those cases where he thinks he will not be called himself, and helps his partner out of his bad scrapes, covers up his mistakes, or worse, and receives a percentage of his earnings for so doing.

Sometimes one of the cut-rater's patients dies under circumstances that throw a strong light upon his incompetence or criminality. Then his favorite mode of procedure is either to "skip between two days" or confine himself to his house and pretend to be seriously ill and under the treatment of his partner, who spreads abroad reports of his critical condition and tries to arouse the sympathy of the people; failing in this, he takes a trip "for the benefit of his health," and stays away until the affair has blown over.

It is this fellow that caters for obstetric cases at less than half rates in hopes of securing the family patronage, and underbids the others for the office of coroner, town doctor, and the like. If he gets the office and don't like it, he resigns, and considers that he has gained something in gratifying his animosity toward the respectable members of his craft by preventing them from ever again receiving a fair compensation for such work.

He is not only employed by the ignorant but by some who would be expected to have more sense than to be deluded by his suave manner and self-laudation, or attracted by his seemingly low prices. The majority of his patrons are of the class that makes the most loud and aggressive objections to all who "cut prices" in their own lines of business. Any one who, like the writer, knows the inside of the K. of L. and some other labor organizations, knows this to be an unpleasant fact.

How shall this pest be dealt with?

If the laws, which give him so much liberty in pursuing his devious course, were not so stringent in some other respects, he might be taken to some secluded spot and drowned or hanged—even dynamite might work if the force of the explosion were not expended upon his cheek. I doubt the efficacy of any milder remedy.

As he may be an educated man, possessing a degree and full legal right to practice medicine in his locality, and sufficiently careful to escape detection in his illegal practices, the laws of this *free* country place no obstacle in his path. Every craft possesses some trade union that serves to keep the wages of its members up to a living rate; but the science or trade of medicine, which requires more skill and a longer apprenticeship than any of the others, is entirely without adequate protection in this vital matter.

Occasionally the "cut-rater" is arraigned for criminal malpractice or some violation of the sanitary laws in the larger cities, but in the rural districts this rarely happens. When arraigned he probably manages to get clear with a small fine, and the notoriety thus obtained helps to advertise him and increase his practice. As he strives to pose as a martyr, the full force of the blow often falls upon the respectable physicians who have thus *persecuted* him by trying to make him conform to the same laws that they voluntarily obey.

The rural population are apt to take but little interest in matters that don't affect their own pockets, and hope, by encouraging the cut-rate doctor, to bring the respectable and higher-priced practitioner down to the same scale of prices, and perhaps compel him to assist them in some rascality *or starve.*

Of course the medical societies can expel him if he is a member; this is occasionally done in the cities, but rarely outside of them. A great many county medical societies do absolutely nothing to elevate the profession or to protect the interests of their members. They meet together once or twice a year, perhaps have a dinner, hear (?) a few papers read (this looks well in the printed report of their meeting, and serves to give the papers a status), elect officers for the ensuing year and delegates to the State societies—and this seems to be their whole *raison d'être.*

Expulsion for cutting prices don't hurt the cut-rate doctor a bit—he thrives on it, for he is thus enabled to pose as the friend of the masses (them asses).

When he needs counsel and has no partner to call upon, he can generally find some one to consult with him—perhaps some one of his ilk from a distance, or some respectable

physician who may not know him, or who may be compelled to do so out of respect for the family or through fear that a refusal might work to his injury. The same people who are accustomed to treat the doctor to all the meanness in their nature, expect him to forget it all and place himself at their command when they need him—*and not ask for his pay*. In fact, they expect to find him an angel after having treated him as though he was of infernal origin and have tried to make the people believe that they were justified in so doing.

When the "cut-rater" does have counsel, he openly agrees with him as to the main points in the case, but secures private speech with some member of the family *after the consultation*, when he uses his best efforts to exalt himself and magnify his importance at the expense of the other practitioner, and, as he will resort to measures that no self-respecting doctor will stoop to, he usually succeeds. Even if he fails in being received as counsel, ostracism does him no injury. His friends believe and report that he knows so much more than the other doctors they are afraid to meet him.

We, who fully understand the cut-rate doctor, strive to have nothing to do with him and as little as possible to say about him. We often regret that we cannot make his patrons see him "with his paint washed off," but if we strive to do so we usually fail, our efforts are attributed to prejudice and jealousy, and we had far better have remained silent.

Many of us have been taught that "the truth is mighty and will prevail," but experience has shown us that it don't stand an even chance with a well constructed and ably managed lie.

The younger, more fortunately situated or less sensitive members of the medical profession may think that this picture is overdrawn; but those who, like the writer, have been constantly coming into contact with the cut-rate doctor for the past twenty-five years, will probably admit that this description of the "thoroughbred" in its main points is as correct as it can be made without using language too lurid to obtain insertion in your columns.

FAX TOX, M.D.

FALLACIES OF POPULAR FADS.

Editor MEDICAL AGE:

In its issue of June 4th last the *New York Press* startles its readers with an announcement that great danger lurks within the communion cup. It further adds that a member of the Fourth Baptist Church in Philadelphia, Doctor Andreas by name, made a careful analysis of the dregs of the cups used at the communion service of that church held the Sabbath previous, and that he was really appalled by the discoveries thus made—the germs of diphtheria, scarlet fever and the like being found in abundance.

Such representations awaken no little surprise among intelligent personages, lay or medical, since it is well known that, as a general rule, unclean people or people of unclean habits are seldom or never found at the communion table. The inference, therefore, is that the *godliness* that pertains to that particular church must be different from that ordinarily found in religious bodies.

For more than sixty years I have been a church communicant, and in both city and country put to my lips, without thought of danger, the cup that had reached the lips of many others before; and so it has been all the world over.

But now how changed! Not the communion cup only, but the kiss of affection, and even the breath of your sweetheart inhaled, may impart disease. The drinking-fountains in the public parks must be equally unsafe, and the cold-water tanks of the W. C. T. U. must needs have their cups treated antiseptically so often as used to render them unacceptable to the thirsty.

Accepting all this as truth, how can one restrain the exclamation: "Where shall we be at the close of the present century, if this bacteria- and bacilli-hunting craze continues for six more years?"

Sincerely yours,

T. B. NICHOLS.

Plattsburg, N. Y.

THE TAPEWORM SPECIALIST.

The field occupied by this individual, says the *Medical Standard*, has been excellently well tilled of late in California. One specimen passes worms of various kinds on credulous patients as having been removed from their stomachs by him, and hence they will be well. He lately ran across a tartar of an old fisherman from whose wife he removed an angleworm, with result that he was arrested and punished for obtaining money under false pretenses. These specialists flourish chiefly among recent foreign importations. The angleworm was a mediæval dodge, but the advance of science has placed the celluloid tapeworm at the service of the specialist.

The Medical Age.

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Editorial.

VALUE OF LACTIC ACID.

Bricheteau, Weber, and Dureau long since advocated the employment of Lactic Acid as a local application to remove the exudate peculiar to croup and diphtheria and other pseudo-membranous affections, and moreover sufficiently proved the activity of the drug; nevertheless it quite fell into desuetude when it was discovered that removal of the membrane was not synonymous with relief of the disease, and moreover that such removal as often as otherwise was pernicious. Nevertheless, in membranous croup, when the exudate interferes with the respiratory act, the acid in proportion of thirty to forty minims to an ounce of water, inhaled every half-hour until breathing is improved, and then every hour or two hours, is often not only satisfactory but most magical in effects. Latterly too it has been discovered that the acid has a marked affinity for morbid tissue of all kinds, and speedily destroys the vitality of such without in the least affecting or impairing that which is normal; hence it has become a valued agent in the treatment of malignant growths, particularly of the mouth, vagina, and other cavities.

Granted that the drug has not sustained the enthusiasm with which it was first greeted, and that its application in laryngology has not yielded results commensurate with the claims made by its sponsors, it is nevertheless a most valuable agent that has secured ill repute more on account of the ignorance of the practitioner in making application than otherwise. Its mechanical action must first of all be understood, and next it is demanded the drug be persistently employed and watched—it is very far from being a remedy to be employed miscellaneously or empirically, or trusted to the hands of ignorant or lay assistants.

Among the various manifestations of chronic laryngitis, there is one form particularly that tends to provoke despair on the part of both patient and practitioner, viz.: the *corditis tuberosa* of public speakers and singers, which induces distinct modification of the voice. Not less stubborn perhaps are those forms of chronic catarrh without culminating in epithelial proliferation and nodes, infecting a considerable area of one or both vocal cords, or appearing as a thickness of the posterior continuations of the latter, or of the interarytenoidei. The unfortunates thus afflicted are usually the *bête noir* of the general practitioner and ultimately are relegated to the laryngologist, who is at once regarded with suspicion by the patient when it is intimated an operation is necessary.

If neglected, the result in both instances is persistent loss of voice. The treatment, moreover, involves many difficulties, hence is apt to become irksome to both the sufferer and his medical attendant.

The most energetic palliatives aided by rigorous hygiene are usually of little avail, hence the removal of morbid growths is speedily advised. Then the often quite pronounced reaction that supervenes upon the surgical procedure requires constant watching and attention. Finally, after a period of apparent improvement the sufferer is apt to relapse into the original condition and give up in despair.

In the local treatment of growths upon the vocal cords and in the larynx, and the management of tubercular and other morbid deposits in the pharynx and upper respiratory tract, especially if persisted in and assisted by rigorous hygiene—and if necessary by electricity and tonics,—Lactic Acid promises and insures better results than can be secured by any other agent.

Besides local applications, inhalation of a two-per-cent. solution employed several times daily should be encouraged—the only specific care to be taken is to avoid contact of the vapor with the eyes. It will be found, moreover, that the red miliary deposits yield much more readily than the white nodes, yet that both speedily reappear if the inhalations are too quickly suspended.

Finally, in lupus, epithelioma and circumscribed local tubercular growths where extended and uniform infiltration justifies neither surgical interference or the application of ordinary escharotics, Lactic Acid, which is little painful in its sequel, may often be employed to great and decided advantage.

MEDICAL DEPRAVITY.

"All things are fair in love and war" is a motto that of late years seems to have acquired a new application so far as medicine is concerned, and in this relation should read:

"All is fair in politics and literature."

There is perhaps nothing more despicable than those who resort to the methods of lobbyism and machine politics in medical societies of which they are by sufferance members. Yet it is a general complaint of the earnest portion of the profession that medical associations are not what they were wont to be in the past; that they are no longer gatherings where thoughts can be exchanged and sociability promoted with a general purpose "to the good of all;" but instead that they are managed in the interests of a few who monopolize everything to serve the ends of personal aggrandizement and advertisement. This is bad enough, in all conscience, but those opposed to such methods at least have the privilege of staying away, and are thus able to avoid the self-trumpeting, wrangling, and mutually admiring lot that so excite and disturb their honest equanimity. But what shall be said when the self-same methods are applied to literature—when they are brought home to the practitioner in an even more obnoxious way through the columns of his journals and books—when they permeate every page of the periodical he subscribes for because of its supposed honesty, and from which the subscriber has the right to expect "the truth, the whole truth, and nothing but the truth"?

Nowadays the medical man opens his journal to find one-half or more of its pages filled with laudations of proprietary nostrums; then turns with disgust to the Original Department and finds—what? A veritable "chestnut" in the way of an article already published in half a dozen other journals, doubtless reproduced to save expense on the part of the publisher, or to please the self-esteem of some unknown individual resident of some obscure cross-roads, or some fledgeling fresh from medical school anxious for recognition, and who does not hesitate to give dogmatic decision regarding matters his betters have pondered over seeking a solution for many years.

But what shall be said of the medical man who offers a paper to a medical society, and immediately after the session—not infrequently two weeks prior to this event—contracts a copy thereof to a dozen or score of journals for publication; and what shall be said of the editors who connive at this sort of practice! Is either honest or trustworthy? Is either fit to sit among reputable men, or to hold a responsible position in any society?

But there is another class of petty literary pirates—men who are stenographers and employed at stated salary to take down the minutes and copy the papers of medical associations, and who abuse their privilege by surreptitiously selling copies of these papers without the knowledge of the author or the consent of the association whose servants they purport to be. What shall be done with such scoundrels? There are secretaries of associations, moreover, who aid and abet this sort of work for the sake of a few paltry pennies. In one instance which came to our knowledge the entire series was thus copied and sold. Still another fraud, not quite so generally practiced, is to contract with one publisher for a monograph on a specific subject when no sooner is the work issued and well advertised than a second volume slightly enlarged, with the addition perhaps of a few borrowed cuts, is sold to another publisher who reaps the reward of the labors of the first.

It is certainly high time that medical publishers, whether of books or of journals, repudiate these dishonest practices and make it an unvarying and unswerving rule to publish no papers that are to appear in other journals, and thus no longer defraud subscribers by presenting as original matter papers that are scattered broadcast in the interests of a few self-sufficient individuals. The journal that is not capable of sustaining itself without resort to such methods certainly is far better unpublished.

CITRIC ACID AND DIPHTHERIA.

Recently through the foreign press the use of Citric Acid has been heralded as almost or quite specific in diphtheria. While its recommendation may be novel, it is certainly not new. From general sources came the same advice as far back as 1866. when the drug was given very thorough trial in different parts of the country with the result that it proved no more beneficial than hundreds of other remedies that have been advanced for the same purpose.

People do not stop to consider the fact that the exudation, or false membrane, is in a measure a protection to an inflamed and ulcerated surface, and that its removal under any but exceptional circumstances—as, for instance, when interfering with respiration —is more apt to prove pernicious than beneficial. Furthermore the medical profession should recognize the fact that diphtheria is a disease less local than constitutional in character, and that an autopsy upon one dead of advanced diphtheria almost invariably reveals the diphtheritic exudate within the kidneys, and perhaps equally manifest in other portions of the economy; consequently the treatment solely of local lesions as manifested in the throat is an act of folly.

A few years ago it was quite the fashionable thing—and is by no means obsolete yet—to apply to the throat by means of an insufflator Citric Acid, sulphur, and corn-starch, but, as already remarked, very little positive evidence has ever been adduced in favor of the procedure. Whatever effect Citric Acid may have on the Klebs-Loeffler bacillus in the physiological laboratory, its administration has never been followed by equally satisfactory results in the human economy. Further, the question whether the bacillus is a sequel of the disease or the prime agent of inducing is very far from being solved, and it is a notorious fact that in many cases of diphtheria this bacillus cannot be discovered.

FAULTS OF THE BICYCLE.

Doctor Laura Liebhardt discussed before the Colorado State Medical Society the question of bicycle exercise for women. She first declared that "the majority ride with the saddle too low," and that this is responsible for cramping of the chest, straining the back, and impeding full action of the muscles of the leg. There results a constant tension of the muscles above the knee, which gives a short awkward stroke, as the reach is too short. The seat should be amply high for the entire leg to be extended and give to these muscles a second of relaxation on the downward stroke of the pedal. The knee must have perfect freedom, and in this respect a woman finds herself particularly handicapped, as she is unable to make the entire stroke with the action of the knee limited by a dress skirt. In Paris they do not stop with the unsightly bloomers, but have almost universally adopted the practical yet far too radical knickerbockers. This striking costume attracts but a passing notice, for the rationale of it all appeals to the French mind, but as we have fortunately not yet reached the Parisian standard it is to be hoped that knickerbockers will confine themselves to spins in the mountains.

Wheelwomen also subject themselves to needless jars by jumping instead of gliding from the wheel. They should be taught to mount and dismount from either side as men are wont to do. Corsets on the wheel, as elsewhere, should be denounced in strongest terms, although nearly one-half of all wheelwomen tie up their muscles in this barbaric fashion. Many condemn cycling on the ground that the movements are identical with those called forth in running a sewing machine. Machine-running stimulates more the faulty way of wheeling, and the position is almost identical with that assumed when the handle bars and saddle are placed too low. In wheeling there are a greater variety of movements and less tension. Two-thirds of all women who ride wheels foolishly incur great risks by riding during certain periods, even to the extent of hill-climbing, when they should never mount a wheel, except for short distances, during the first two days.

During the discussion the general opinion seemed to be that the saddles in use were hardly proper. The long, wide saddle suspended between springs was considered very much superior to the rigid or hard models. A saddle much wider throughout was considered desirable, and cases were quoted to substantiate this claim.

MODERN HABITATIONS AS A FACTOR IN DISEASE.

At the recent International Congress held at Rome, Doctor Tyson of Paris spoke most emphatically on this question. He compared the modern habitation to the holes of the troglodytes and cliff-dwellers, minus the advantages of fresh air accruing to both the latter. In many dwellings, warehouses, offices and banks, it is necessary to keep gas or electricity burning all day, and notoriously in many sleeping-rooms sunlight never penetrates in any form. This mode of living, coupled with the abuse of narcotic and alcoholic beverages, predisposes any organism to attacks of tuberculosis.

Reform is needful—marked reform—whereby all buildings will be constructed with large open courts, so that even the inside rooms will be freely permeated by the sun's rays. Further, it should be remembered that the use of alcohol—its habitual consumption in large quantities, even short of drunkenness and inebriety—is equally predisposing. Alcohol is a stupefying poison, and should only be given in medical doses just as is strychnine, digitalis, and other drugs of this class.

THE ORIGIN OF PUERPERAL FEVER.

Doctor Fred. Byron Robinson is accredited with the utterance:

For six years I have advocated that puerperal fever is caused by rupture of pathogenic cysts at labor and that most of these pathogenic cysts are of gonorrhœal origin.

Doctor Robinson's experience with the puerperal state must certainly have been more unique than those that accrue to the general practitioner. During twenty-eight years the writer has seen but one case that could have come under the category outlined above; on the contrary, experience and observation evidence that gonorrhœal women seldom suffer from puerperal infection; that they are not prolific, as a rule; and that the most severe cases are met among multipara in whom there is not a suspicion of specific infection. Indeed, there is good reason for believing the puerperal state primarily arises from some neurosis.

EDITORIAL NOTES.

Animal Extracts Again.—

Among the numerous new remedies which are constantly proposed, certain animal extracts are being highly lauded. Among them is brain extract for epilepsy. Of all the peculiar and absurd therapeutic measures that have been recently advocated this seems to us one of the most absurd. Its principal advocate in this country is content with saying that it proves a valuable adjuvant to other treatment. There has been no evidence whatever advanced to show that it is of value in this disease. Theoretically there is not a single reason why it should be. The brain is not a secreting tissue. The use of brain extract and thyroid extract is in no sense parallel. The thyroid is a secreting gland whose absence causes a well defined train of symptoms. The administration of brain extract has no rational explanation whatever. It must be remembered that epilepsy is a disease which shows a striking tendency to improve under any new treatment, and almost any new plan of treatment is for a time successful in the hands of its originator. The old epileptic who goes to a new doctor usually improves temporarily. Modification of diet and regulation of the digestive organs alone is often followed by a marked decrease in the paroxysms. It is not strange if the use of this preparation should be also followed by temporary improvement. As a therapeutic agent, brain extract is, in our opinion, like certain other modern preparations, a striking example of an "advance backwards," and may be properly placed in the same category as the Chinese system of administering an infusion of toads killed under a full moon.—*Gaillard's Medical Journal.*

For the Bath.—

Take five pounds of oatmeal ground fine, half a pound of pure Castile soap powdered, and one pound of powdered Italian orris-root, mix thoroughly, and put into bags of thin cheese-cloth, four inches square, sewing them tightly that the contents may not ooze out. In the bath use one of these bags instead of a sponge. It gives a thick velvety lather,

wonderfully softening and whitening the skin, and at the same time imparts a lasting flavor.

Outdoor Exercise for Children.—

Nothing helps more to make and keep a child strong and healthy than plenty of outdoor exercise and fresh air. The child should be sent out to play, or left out, every day when the weather permits, and when absolutely impossible to go out should put on robes if necessary and play in a room with the windows open. It should not have its movements impeded by bundling, but instead be dressed in well fitting clothes.

De Mortuis Nil!—

The following medical journals have recently suspended publication: The "*National Medical News*," "*Epitome of Medicine*," "*Country Doctor*," "*Weekly Medical Bulletin*," "*American Gynæcological Journal*," and the "*Journal of Surgery, Gynæcology, and Obstetrics.*"

This probably is not a complete list. There are several that have recently suspended that are already well forgotten.

American Medical Publishers' Association.—

In consequence of the closing of the hotel at White Sulphur Springs, W. Va., the meeting-place of the Association has been changed to Hot Springs, Virginia, which is but a few miles east on the Chesapeake & Ohio Railway. The date has also been changed to Monday and Tuesday, August 13th and 14th.

"Euchlorin!"—

The *British Medical Journal* has brought out a new remedy under this title, which is nothing more than the old-fashioned solution of potassium chlorate in hydrochloric acid and water. "A powerful antiseptic."

Great Discovery!—

A writer in the *Homœopathic News* has discovered that the eating of ham is the cause of one-third of all the rheumatism. Great head!

Tracheotomy versus Intubation.—

It is now the consensus of expert medical opinion that the former is much the safer operation in any laryngeal stenosis.

Items and News.

The Physicians at Fault.—

The fact that persons often use quack and harmful preparations is largely the fault of the physician, who will give careful attention to a pronounced ailment but exercises no patience in the trivial disorders of life. The use of cosmetics particularly, by women, has always been considered in very bad taste when rouge, paint, penciling, and such methods come into play; but many such errors could be avoided if the physician would take as much interest in a bad complexion as in a severe case of typhoid fever. A cosmetic in its strict sense is something that tends to embellish and beautify, and no woman should be blamed for using a cosmetic if it be of the proper kind.

The surgeon who performs an operation for hare lip and leaves an ugly scar with a notch in the upper lip may have closed the cleft, but has not finished the operation until he has brought the entire edges together and used means to make the scar as inconspicuous as possible.

If the physician would take as much pains in thickening of the hair, baldness, rough complexion, lack of color, wrinkles, warts, and corns, as he would for any of the major ailments, and if sensible directions and care were taken, many a woman would be spared the use of paint and rouge, and, instead, would have the healthy color and fresh skin which careful, intelligent attention on the part of a physician would give.—*Reflector.*

Who Knows Him?—

The man who has no time to read, whose table is full of journals from which the wrappers have never been removed, is the man who seldom frequents medical societies or professional gatherings. Two to one he has not looked into many books since he left college; he practices his profession as he did thirty years ago, and this man is likely to be the first one to steal your cases or otherwise practice unprofessional and underhanded tricks upon you. He will sometimes borrow your medical journal that you have paid for, however. This kind of physician is fortunately dying out, and honest, persevering, gentlemanly, scholarly, and skillful men are taking his place—thank God! A few such are found now and then, however, but when found they should be sat upon.—*Rhode Island Medical Science Monthly.*

Early Rising.—

The old adage, "Early to bed and early to rise, makes a man healthy, wealthy, and

wise," is nonsensical excepting so far as regularity is concerned. What a man needs is sleep. Eight or nine hours' sleep regularly in the twenty-four hours is what the tired body requires for recuperation, and it matters not whether it be taken before or after midnight. There is no more virtue in the morning air to invigorate the body by exercise than to invigorate it by sweet slumber if the room is well ventilated. It is true that when a man goes to bed at 9 P.M. he is rested by 6 A.M., and should get up. To lay and loll longer in bed, and yawn and twist and turn, is killing time and cultivating a bad habit, and should be avoided. After eight or nine hours' sleep a man ordinarily becomes restless and should get up at the first awaking, and all there is to the early-rising habit is—regularity.—*Kansas Medical Journal.*

Keep Out the Croaker.—

Men or women who have always a tale to tell of "how he suffered that way himself" should be kept out of the patient's room. Their sympathy will do harm every time. In the sick-chamber, if the patient can see company at all, there should be only bright, cheery talk; and the creature with "symptoms" can talk a man into having any and every disease on earth in less than half an hour. A sick man should be led to forget his ills and not to rehearse them or compare notes.—*Chicago Journal.*

Professional Common Sense.—

Laennec perfected the stethoscope just as Bell perfected the telephone; each studied the transmission of sound. "Professional skill," says Fothergill, "consists of a foundation of common sense with a superstructure of special education." A medical student may, by his own efforts, supply all other deficiencies, but if he lacks common sense, that element which Guizot has denominated "the genius of humanity," his failure is inevitable.—DOCTOR W. H. BLAKE, in *Atlanta Medical and Surgical Journal.*

Josh Billings's Medical Wisdom.—

Doktors are not all quaks; you hav got wrong noshuns about this. Doktors, lawyers and ministers hav a hard row to ho; they hav to deal with kredulity, knavery, and fears of the people—three ov the most difficult traits in human natur tew handle. If i was a doktor and understood my bizzness, i should doktor my pashunts, and let the disease tak care of itself. More folks are cured in this way than enny other.

Canadine.—

E. Schmidt describes the production of pure Canadine from hydrastis rhizome. The alkaloid was obtained in white needles melting at 132.5°, and proved to be tetrahydroberberine, isomeric with hydroberberine, and yielding berberine when a solution was exposed to light and air. Numerous salts and other compounds of Canadine are described. —*Pharmaceutical Journal and Transactions.*

A Physiological Discovery.—

The first case of a flower being fertilized by bats has lately been reported by the botanist Burck. It belongs to the genus *Freycinetia* and has large, bright, rose-colored bracts, which the bats are fond of eating. The male and female flowers are on separate plants, and the visitor carries the pollen on its head from one to the other.—*Popular Science News.*

Medicine in Sweden.—

In Sweden ten years of study is incumbent on every medical student. They are so particular in that enlightened country to have their medical men thoroughly equipped and "ethically developed" that the practice of homœopathy is forbidden, and every globule of homœopathic medicine introduced into the country has to be smuggled.—*Exchange.*

Followed Instructions.—

Mrs. Finnegan: "He's no better, docther. Y' tould me to give him as much of the powder as would lay on a sixpince. I hadn't a sixpince, but I gave him as much as would go on five pinnies an' two ha'pinnies, an' it's done him no good at all, at all."—*Punch.*

A Certain Cure.—

Young Man (helplessly): Doctor, is there any cure for the liquor habit?

Doctor (thoughtfully): Y-e-s, one.

Young Man: What is it?

Doctor: Marry a woman bigger than you are.

A Serious Charge.—

Doctor William Thomas Coggin, of Athens, Ga., who claims the honor of doing the first symphysiotomy in this country, is denounced by the Etowah County, Alabama, Medical Society as an impostor and a fraud.—*Alabama Medical and Surgical Age.*

Not So Very Uncommon Either.—

A celebrated foreign surgeon recently operated upon an ovarian cyst, and, opening it, found the tumor to be a gravid uterus containing a four months' fœtus.—*Medical Press and Circular.*

Poisoning by Potassium Bromide.—

Several cases of fatal acute poisoning by this drug are now on record.

Book Reviews.

DYNAMICAL THERAPEUTICS. By Henry T. Webster, M.D. Cloth; 8vo; pp. 680. Price, $5.00; sheep, $6.00. Published by the author, Oakland, California.

The rapid advance in eclectic therapeutics within the past few years is the excuse of the author for adding another work to the number already existing upon this subject. He also insists "it is not intended to supplant any other work, but to fill a new place."

Careful perusal of the volume adds both to its interest and to the estimation of its value. There is embodied a vast amount of therapeutic material that cannot be had in any other work—that has been gathered from varied and wide sources,—much of which perhaps is not available to any practitioner save in the isolated pages of numerous journals.

The author manifestly believes in specific medication, as may be judged from the title of the volume—a theory with which we are inclined, to some degree at least, to take issue. This does not, however, militate against the value of the work. Indeed, there is food for both study and thought by one of any school. There is perhaps nothing yet published in the English language which deals so exhaustively with the physiological action of small doses—we do not mean by this Hahnemannic attenuations, but simply minor doses. It is a fact that minute doses are continually growing more and more acceptable to a large number of physicians, that it is being recognized that the lesser potions in repeated doses are in the majority of instances more efficacious than large doses at wider intervals—the first insures a continuous effect, in the second the result is apt to be interrupted. Merely for the study of small doses the volume would be valuable, and as such we would commend it to the medical profession at large. That the author is not bound by the old so-called eclectic rule—that the agents of mineral origin should be entirely ignored—is evident from the fact that the action and uses of iron, mercury, zinc, lead, iodine, etc., are in many instances carefully considered. More too is added to our knowledge regarding the newer botanical remedies, and the influence of certain of these as claimed for the genito-urinary apparatus is certainly worthy of thought and suggestive of the need of further study.

THE ATLANTIC MONTHLY. Price, 35 cents; $4.00 a year. Houghton, Mifflin & Co., Boston.

The July number contains "Philip and his Wife," chapters XX–XXII, by Margaret Deland; "Letters of Sidney Lanier," by William R. Thayer; "The City on the Housetops" gives a vivid and sympathetic picture of the summer life on the roofs of houses in the most crowded quarters of New York; "Pontiac's Lookout," a French-Canadian story, by Mary Hartwell Catherwood; "Al Mamoun," by Clinton Scollard; A Nova Scotia paper, "The Home of Glooscap," by Frank Bolles; "Lucretius," by R. Y. Tyrrell; "On the Beach at Daytona," a Florida sketch, by Bradford Torrey; "The Red Bridal," a Japanese love story, by Lafcadio Hearn; "The Mayor and the City," by Harvey N. Shepard; "To-Morrow and To-Morrows," by Stuart Sterne; "Coleridge's Introduction to the Lake District," by Myron B. Benton; "On Leaving Winchester: MDCCCXCI," by Louise Imógen Guiney; "In the Dozy Hours," by Agnes Repplier; "Monetary Reform in Santo Domingo," by J. Laurence Laughlin; some biographical reminiscences of the Baroness Tautphœus, by M. L. Thompson; "Modest Excellence;" "Dean Stanley;" "French Aid in American Independence;" "Comment on New Books;" "The Contributors' Club."

A TEXT-BOOK OF GYNÆCOLOGY. By James C. Wood, A.M., M.D. Half morocco; 8vo; pp. 858. Price, $7.00; cloth, $6.00. Boericke & Tafel, Philadelphia.

Though this volume emanates from homœopathic sources, it must be admitted that it is a most excellent work and evinces great care, not only in compiling but in elucidating the newer points of gynæcology. It not only embodies in concise form for the specialist the most advanced teaching of American and European schools of gynæcology, but presents the facts in such a way as to enable the student and non-specialist to obtain at least a fair knowledge of the subject without exhaustive research.

One thing demands special notice: the minutiæ—the details that are so generally overlooked by the average teacher—here are given special attention in a way to thoroughly aid and enlighten the tyro. Much space is devoted to diagnosis, especially of abdominal tumors, the author declaring that he believes "most emphatically that 'blind' gynæcology has been the curse of womankind."

Finally, in dealing with the treatment of various affections the author has not confined himself in any degree to exclusively homœopathic lines, but has seized upon all that is best, no matter where found.

The illustrations are of very superior character. Many of them were obtained from

the museum of the Royal College of Surgeons, London, the most splendid pathological collection perhaps in the world. We bespeak for this volume a widespread sale regardless of the peculiar faith of the author. It is the work of a true scientist, one not bound by any narrow line of thought or belief.

LITTELL'S LIVING AGE. Price, 15 cents, $8.00 per year. Littell & Co., Boston.

What more delightful companion can one desire for the summer months than a copy of a favorite magazine; and what magazine is so great a favorite, so desirable in every way, so rich in the variety and extent of its contents, so full of interest, so entertaining, as *Littell's Living Age!* To the lover of good reading it is the ideal magazine—containing only the very best and choicest of recent literature—suited to every one's needs, and good for every day in the year.

In fiction, as in other respects, the numbers for the current year have, perhaps, never been surpassed. Two copyrighted serials, translated expressly for its columns from representative foreign authors, have appeared, while a third of yet greater interest, entitled "The Dean of Killerine," is now running.

It is impossible to enumerate the long list of other articles, many of great interest and all of permanent value, which appear in the same issues Suffice it to say that no other single publication can show so rich a table of contents.

GODEY'S MAGAZINE. Price, 25 cents; $3.00 a year. The Godey Co., New York.

The June number contains "Seward at St. Thomas," by Frederick W. Seward; "Chance"—a tale of Munich life,—by Leon Mead; "Fate and the Major," by John Habberton; "The Paris Salon of 1894," by Baroness Althea Salvador; "For Better or for Worse," by Albert Hardy; "An Actor," by Rose Hawthorne Lathrop; "Fanny Kimberly's Conscience," by William A. Ayres; "Two Graves in Greenwood," by Edgar Fawcett; "The Thirst and the Draught," by Julia Magruder; "Tom Hood," by S. Parkes Cadman; "My Fly-Catching Neighbors," by Harry Edward Miller; "The Brighter Side," by M. E. W.; "The Passing Show," by Anne Helme. The poetry of the number is: "Oh, Ambient Air," by Arthur Chamberlain; "June," by Edward Stratton; "Good-Night," by Martha McCulloch Williams; "A Sea Picture," by Frank Dempster Sherman; "Fate," by Emma J Gompf; "Perplexity," by Coggeshall Macy. There are also "Book Reviews," "Editorial," and a department entitled "Our Boys," by Ralph D. Paine.

THE DELINEATOR. Price, 15 cents; $1.00 a year. Butterick Publishing Co., New York.

The July, or midsummer, number begins a new volume with a most attractive table of contents. The opening chapter is on "The Voice," by the author of the Delsarte System of Physical Culture. The College article for the month is "A Girl's Life and Work at Wellesley;" an expert writes on "Telegraphy as an Employment for Women;" "The Daughter's Friends" is the subject of the article in the Mother and Daughter series; the chapter on "Wise Living" gives some salutary advice on bathing; a novel entertainment in the shape of "A Fan Party" is described; the ceremonial for a "Silk and Leather Wedding" is given; there is also a paper on "Picnic Giving." Flower-making is especially considered in the "Uses of Crepe and Tissue Papers," and further instruction is given on "How to Serve Small Fruits." There are talks "Around the Tea Table," "Book Reviews," and illustrated papers on Knitting, Netting, Tatting, and Crocheting.

THE DISCOVERY OF MODERN ANÆSTHESIA. By Doctor L. W. Nevius. Cloth; 8vo; pp. 111. Price, $1.00. Published by the author, Cooper Institute, New York.

This volume is the work of one whose enthusiastic interest in the subject has prompted him to lavish much labor and thought upon the early history of anæsthesia as revealed by the biographies and writings of Simpson, Long, Wells, Morton, Jackson, Riggs, and Cotton.

The history of this great discovery has been the subject of much dispute, and the publication of such a volume as this, setting forth the main facts in the case of each of the claimants, is certainly very satisfactory. The author does not seek to promote the claim of any of those whose names have been associated with the discovery. On the contrary, his work is wholly impartial, his handling of the history correct, and the reader is left to judge upon whom rests the honor of priority. Nothing has heretofore been published which enters into details so thoroughly or so concisely.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 a year. Charles Scribner's Sons, New York.

The July number opens with a descriptive article on the "North Shore of Massachusetts," by Robert Grant. Other articles are: "By the Sea," by Anne Mayo Maclean; "The Gettysburg Week," by Philip Schaff; "Among the Tarahumaris"—the American cave-dwellers,—by Carl Lumholtz; "John March, Southerner," Chapters XLIII–XLVII, by Geo. W. Cable; "The French in Holland," by Philip Gilbert Hamerton; "A Man Without a Memory," by William Henry Shelton; "Beasts of Burden," by N. S. Shaler; "The Workingman"—sketches of American types,—by Octave Thanet; "The Sleep," by M. L. van Vorst; "The New York Tenement House Evil and its Cure," by Ernest Flagg; "Aut Cæsar, Aut Nihil," by Agnes Repplier; "An Ally of Mr. Cross," by John J. à-Becket; "The Point of View": The Pleasures of Moderation—An Interested Observer—For Masters of the Revels; "Mirage," a poem, by Graham R. Tomson.

MCCLURE'S MAGAZINE. Price, 15 cents; $1.50 a year. S. S. McClure, Limited, New York.

The contents of the July number are: "The Heraldry of the Plains," by Alice MacGowan; "Told in Confidence," by Celia Eliza Shute; "Human Documents" comprises a series of portraits of Lord and Lady Aberdeen and Captain Charles King; "Alphonse Daudet at Home," his own account of his life and work, reported by R. H. Sherard; "An Ingenue of the Sierras," by Bret Harte; "Homestead as Seen by One of its Workmen," by L. W.; "The Revolt of The"—a page from the domestic history of the twentieth century,—by Robert Barr; "A Chemical Detective Bureau"—the Paris Municipal Laboratory and what it does for the public health,—by Ida M. Tarbell; "The Ebb Tide," by Robert Louis Stevenson and Lloyd Osbourne, comes to an end in this number. The poetry is "From a Lover's Diary," by Gilbert Parker; "The Je Ne Sais Quoi," by William Whitehead.

DEMOREST'S MAGAZINE. Price, 20 cents; $2.00 a year. W. Jennings Demorest, New York.

In the July number Reverend Doctor Parkhurst, Palmer Cox, Bill Nye, Anthony Comstock, and George Francis Train give their views on "Men Who Make the Best Husbands." Other articles are: "A Day on an Ice-Field;" "Ocean Life in Island Homes;" "How to Play the Violin Without a Master." There are a number of bright stories and poems, among them "Society Fads," and "Bagging a Birthday." The housekeeper will find many excellent suggestions in "The Arrangement of Summer Draperies." "Sanitation" contains some specially good ideas in "The Adaptation of Food to Work," and the other departments abound with good things. The illustrations are numerous and beautiful.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 a year. The J. B. Lippincott Co., Philadelphia, Pa.

The complete novel in the July number is "Captain Close," by Captain Charles King. Louise Stockton begins a strong story, "A Mess of Pottage," to be concluded in the August issue. Other articles are: "At Marrini's," by Richard Hamilton Potts; "A Case of Hoodoo," by William Cecil Elam; "A Roman Nurse," by Ellen Olney Kirk; "Mill-Girls," by Elizabeth Morris; "The Conscience Fund" of the U. S. Government, by Francis Leon Chrisman; a scattered sect, "The Army of the Lord," by H. V. Brown. In "Talks with the Trade," "More Rudiments" are considered. The poetry of the number is by Celia A. Hayward, Zoe D. Underhill, and William S. Lord.

TRANSACTIONS OF THE INDIANA STATE MEDICAL SOCIETY. Cloth; 8vo; pp. 380. William B. Burford, Indianapolis.

This is a complete report of the forty-fourth annual session of this association held in Indianapolis May 11th and 12th, 1893. It contains the usual Secretary's and Treasurer's reports, President's address, and an array of most excellent articles, along with list of officers list of papers presented since the organization of the Society, constitution and by-laws, and list of members.

TRANSACTIONS MEDICAL ASSOCIATION OF GEORGIA, 1893. Cloth; 8vo; pp. 426. Published by the Association, Atlanta, Ga.

This most tastefully arranged and bound volume represents the forty-third annual session of this society, and embodies the usual papers and minutes. Both the illustrations and papers are of an unusually superior character.

Therapeutic Brevities.

Nuclein.—The term "Nuclein" is applied to nitrogen- and phosphorus-bearing organic substances which occur in the animal as well as the vegetable organism, in the seed, and in cells capable of development. Differing in their chemical composition, the Nucleins consist substantially of nucleinic acid and a highly complex basic substance (albumen). They are insoluble in alcohol and ether, tolerably soluble in caustic alkalies. They resist peptic digestion, and may thus be separated from most other proteid bodies.

Albumen has hitherto been regarded as the most important part of the living substance, but more recent investigations (with special reference to the very interesting labors of Doctor Vaughan, of Ann Arbor) have shown that the Nucleins play an equally important rôle. Blood-serum has long been known to possess bactericidal properties, and for this reason it has been introduced into therapeutics. But serotherapy, owing to the large quantities of liquid necessary to inject, has proved impracticable. Doctor Vaughan has now succeeded in establishing the presence of Nuclein in the blood-serum, and has furthermore shown that this Nuclein possesses bactericidal properties. The white blood-corpuscles are most probably the source of this Nuclein. This fact confirms the so-called "phagocytic theory," developed by Metchnikoff (1884), which teaches that the white corpuscles are the natural defenders against bacterial invasion. Doctor Vaughan further experimented with Nucleins obtained from yeast, the spleen, eggs, etc.; all of these he has found to be distinctly bactericidal. In harmony with Vaughan, Professor Kossel of Berlin has recently shown that a 0.5-per-cent. solution of Nuclein is capable of destroying in a short time cholera and typhus bacilli. The Nucleins are therefore to be regarded as "the defensive proteids" with which the organism combats the pathogenic bacteria; in other words, Nuclein is the substance which would stimulate the activity of those organs whose function it is to protect the body against infectious diseases. From this brief exposition it is evident that in Nuclein we have a very valuable addition to the materia medica. The experiments made by Doctor Vaughan to determine whether the Nucleins can be employed to prevent or to arrest the growth of germs in the animal body, are very promising. The Nuclein solution used in these experiments contained about two per cent. of yeast Nuclein. It may here be mentioned that Doctor Bracker, of Paris, read before the recent International Medical Congress at Rome a long series of observations on the treatment of some infectious diseases by means of injections of sterilized yeast-cultures, the results of which, he states, were extremely favorable. No doubt the results obtained should be attributed to the Nuclein in the yeast cultures. Doctor Aulde declares in the *American Therapist:* "I am prepared to assert that in this phosphorized proteid (Nuclein) we have one of the most promising remedies that has ever been offered to the medical profession in the history of its existence."

The precise application of Nuclein remains as yet the subject of investigation; it may prove of great value in combating blood diseases, in anæmia, influenzal debility, and notably in infectious diseases (tuberculosis, diphtheria, etc., etc.).—*Bulletin of Pharmacy.*

Atropine as a Hæmostatic.—The great value of Atropine in the various forms of shock is generally recognized, while its hæmostatic properties in all forms of hæmorrhage are not so well known. Atropine, by its power to stimulate both the primary and secondary vaso-motor centres and at the same time excite the cardio-innervating centre, tends to increase the power and efficiency of the heart's action. By its power to stimulate the innervating impulses distributed to the muscular coats of the arteries and heart, the volumetric capacity of the arterial system is expanded, and thus blood is taken from the distended veins and the loss is arrested. This change in the position of the bulk of the blood brings about lessened pressure in the veins, and a clot forms, the vessel closes, and the hæmorrhage ceases. As a hæmostatic in all kinds of hæmorrhage when the bleeding is of a passive nature it is almost a specific. In epistaxis it is invaluable, if not a specific, in doses of $\frac{1}{100}$ to $\frac{1}{60}$ grain given hypodermatically as often as every twenty minutes until the blood is completely stayed. Dmitrieff reports the successful management of two cases of metrorrhagia by Atropine.

In one case hæmorrhage persisted despite the employment of the usual remedies, including the tampon, but ceased after the injection of $\frac{1}{24}$ grain of Atropine. The second case was that of an anæmic woman, who became syncopal and cold from the loss of blood. The first injection was followed by improvement and the third by cessation of the bleeding.

Atropine in hæmorrhage has proven in my hands to be the best possible remedy. It is free from danger, acts immediately, and can

be used conveniently from the fact that most hypodermic cases contain the remedy. A trial will convince one of its great value.—DOCTOR J. W. BYERS, in *Charlotte Medical Journal.*

For Sweating Feet.—No plan of treatment has ever equaled that suggested by Hebra years ago and founded upon the use of diachylon ointment, which is made by heating diachylon plaster over a slow fire and adding an equal weight of olive oil under constant stirring. This is applied to the feet twice a day spread upon cloths coming between the toes as well as over the whole foot. Stockings and thin shoes are to be worn, and when the dressing is applied the feet should be wiped dry. After a few days there is exfoliation of the cuticle, leaving a healthy skin beneath, upon which drying powders such as one drachm oxide of zinc to the ounce of starch powder are to be applied for some weeks. Afterwards comfortable, well fitting shoes must be worn and the feet kept religiously dry and warm.—*Exchange.*

Hysterionica.—For some reason this drug, a native of Chili, has not in this country received the degree of popularity to which it is entitled. It is not poisonous, and produces no unpleasant effects; has an aromatic bitter taste, and is especially influential in its action upon the intestinal canal; in other words, it is a powerful intestinal tonic. For this reason it is often of value in the treatment of diarrhœas and dysenteries, affording relief when even coto appears inactive. It has been suggested, therefore, that more attention should be given to this drug, especially in the management of the class of cases to which it is especially applicable. Its balsamic nature, moreover, gives promise of further usefulness in the management of diseases of the genito-urinary tract.

Threatened Abortion.—Polak, in the *New York Journal of Gynæcology and Obstetrics*, advises rest in bed, morphine or opium per rectum, and drachm doses of the fluid extract of Viburnum Prunifolium. Of thirty-two cases treated in this way, none resulted in miscarriage.

Kava-Kava.—This is sedative and tonic to mucous membrane, hence valuable in specific urethritis, and especially so to induce appetite in general gastric debility with catarrh. In such cases it proves an active diuretic.—*Medical Sentinel.*

Medical Progress.

THE THORACIC DUCT.—There is hardly any structure in the body of equal importance of which so little is heard as of the thoracic duct. The average student has perhaps had it demonstrated to him once during his anatomical course, but he seldom sees it a second time, and after he has passed his examination in that science he remembers that there is such a thing as the thoracic duct but little oftener than he remembers its neighbor, the vena azygos. Disease of this organ is almost unknown, and accident to it very rare, so well are its twenty inches of length protected by its situation, close in front of the dorsal spine. Among the hundreds of thousands of cases reported in the medical and surgical annals of the late war in this country, there is no mention of injury to the thoracic duct, nor is it mentioned in the records of the Italian war of 1859, nor in those of the Crimean war. Some years ago while exhibiting the original "living skeleton" to his class in anatomy at the Harvard Medical School, Doctor O. W. Holmes stated that it had been suggested that there might be a stricture of the thoracic duct in the skeleton's case, to account for his extreme emaciation, and Doctor Holmes further said that if this were so it would be a very rare, almost unparalleled case, and necessarily fatal. This ingenious hypothesis, however, was not necessary to account for the phenomenon, which, like the numerous similar cases that have been exhibited since, is well known to have been nothing more than an extreme example of progressive muscular atrophy.

Almost as rare as ordinary accidents to the thoracic duct are injuries to it in the course of surgical operations. The subject was discussed at a recent meeting of the Philadelphia Academy of Surgery, the surgical anatomy of the part being demonstrated by Doctor J. H. Brinton, who showed two dissections, one exhibiting the usual termination of the duct at the point of junction of the left subclavian and internal jugular veins, and the other dissection one of its less common modes of termination, in a small plexus of terminal branches emptying separately into the subclavian and internal jugular veins at points just above their junction. There is almost an infinite variety of arrangement of the terminal branches in these cases where a plexus is formed, some of them going to the axillary, vertebral, azygos and innominate veins, and even crossing over to the right subclavian. In these cases of anomalous termination it is evident that the surgeon may

easily run across some of the irregular branches in operations upon the deeper structures at the root of the neck. At the meeting referred to, this matter of operation wounds of the duct was dealt with by Doctor W. W. Keen, who added a case of his own to the few upon record.

In view of the frequency of operations upon the left side of the neck, it is rather surprising that there are known to have been but four cases in which the thoracic duct has been wounded during an operation. Cheever, of Boston, reported the first case, in 1875. In removing a tumor from the left side of the neck, while working in the neighborhood of the junction of the subclavian and internal jugular veins, there suddenly appeared a flow of a transparent, viscid, coagulable and colorless fluid, that ran out of the wound in quantities as large as an ounce at a time some six separate times. This flow persisted in spite of the double ligature of the subclavian vein, but was controlled by pressure. The patient died of exhaustion thirty-six hours after the operation, and an examination made after death excluded the possibility of the fluid coming from a cyst, hydrocele of the neck, or pleural effusion, and the conclusion reached was that the thoracic duct must have been wounded.

The second case, Bœgehold's, occurred in 1880. During an operation similar to Cheever's a stream of milky fluid the size of a straw suddenly poured out over the field of operation. Other sources of the fluid being excluded, it was concluded that the thoracic duct had been opened. In this case the whitish, milky appearance of the fluid favored the view that it was chyle, the transparency of the fluid in Cheever's case being explained by the fact that the patient had fasted for twelve hours before the operation.

The third case, reported by Keen together with his own case, which now appears in print for the first time, was an operation on a malignant tumor on the left side of the neck, by Doctor A. M. Phelps, at Burlington, Vermont. Three inches of the internal jugular vein were removed near its junction with the subclavian, and after the operation was completed there occurred a profuse discharge of the color of skimmed milk, the quantity of which was estimated at three pints a day. The patient lost flesh rapidly, and it was believed that the main trunk or a large branch of the thoracic duct had been opened. Pressure forceps were applied to the point from which the fluid escaped, and the flow was permanently stopped.

Keen's own case does not differ materially from those that have gone before, except that the escaping fluid was clear, because the patient had fasted for eighteen hours before the operation. He collected some of the fluid in a hypodermic syringe, and under the microscope found that it contained lymph corpuscles and many oil globules.

These cases are sufficient to show that the danger of cutting the thoracic duct in a deep operation upon the left side of the neck is a real one, particularly if the duct should have an irregular termination. They also show that wounds of the thoracic duct are not fatal, and may readily be made to heal. Experiments upon animals show that even the complete ligature of the duct is not fatal, but it is difficult to understand how a man could be nourished if the duct emptied in the usual fashion, by one mouth, and that were completely cut off.—*Northwestern Lancet.*

URIC ACID AND DISEASE.—According to Haig, uric acid is always produced in the same quantity as urea, but is excreted in various proportions—when excreted remaining stored up in the liver and spleen. The acid is not injurious while stored up, but when circulating in the blood, and when in excess in the urine it is proportionately increased in the blood. Whether it shall be left in the system or excreted, depends upon the alkalinity of the blood. When the alkalescence of the blood is increased, the acid is dissolved out of the tissues, carried into the circulation, and there produces its peculiar effects. As there are normal variations in the alkalinity of the blood, corresponding to variations in the acidity of the urine, there is a diurnal variation in the excretion of uric acid. When uric acid is circulating in the blood, Haig thinks there is a rise of arterial tension due to irritation of the arterioles.

There are many objections to this theory. Haig estimates uric acid by a method which yields too high a result. In my experiments the uric acid is converted into ammonium urate, decomposed by dilute hydrochloric acid, and filtered, and the uric acid separated by the filter—this is the method recommended by Von Jaksch, and sufficiently accurate for clinical purposes, though it is said to yield too little uric acid. My figures, however, are very nearly the same as those of Haig, and the method is certainly sufficiently accurate for comparing the varying conditions occurring in the same case.

Considering the diurnal phenomena, Haig dwells only upon the alkalinity of the blood, and this is presumed to vary inversely as the acidity of the urine. But it has been found that the acidity of the urine varies inversely

as that of the gastric juice. The di-sodium phosphate and the sodium bicarbonate contained in the blood, although of alkaline reaction, are theoretically acid salts. During the oxydation processes of the blood, acids are constantly forming in it. Divers glands are constantly withdrawing acids as would be done in a laboratory by a dialyzer. Muriatic acid is conspicuous for its diffusibility. During digestion the acidity of the urine diminishes; during fasting it rises; the introduction of alkaline bases with the food intensifies this. The more vigorous the digestion and the functioning of the kidneys, the more perfectly would the uric acid be removed. In a paper published in 1891, Haig states that the acid tide reaches its height about midnight, and from lack of supply then begins to fall away. This is contrary to both theory and fact, yet on this statement Haig bases many assertions. According to theory, the acidity of the urine should be greater in the morning hours before breakfast. I have tested this and found the acidity was at its maximum at eleven o'clock in the evening, and almost as high just before breakfast. Haig explains all the injurious effects of uric acid by the hypothetical rise of arterial tension, yet does not furnish any proof that acid causes such general arterial tension. He has presented a few sphygmograms, three taken from himself, but in not one case was the uric acid measured.

The greatest excess of uric acid has been observed in leukæmia, anæmia, and phthisis, in all of which the vascular tension is low; it is the retention in the nerve tissues of the toxic products of nervous function that causes irritation of the vaso-motor centre, and this is followed by a rise of vascular tension—this is well observed in asphyxia, where the molecular respiration is arrested and carbonic acid retained in all the tissues. The rise of tension in nephritis is due to the deficient elimination of similar toxic products in the blood, but not necessarily uric acid. Scanty acid urine is habitually noticed in lithæmia. The deposit of uric acid does not necessarily imply anything more than a deficiency in the water excreted in the urine, but this latter probably indicates a retarded metabolism. Water is constantly formed during metabolism, and it is this which constitutes the bulk of the water in the urine; if it be deficient, urea is liable to be deficient. Haig quotes the following table from Garrod, and thus analyzes it:

"On a mixed diet, the ratio of uric acid to urea was one to twenty-nine; on an animal diet it was one to thirty-eight; on a vegetable diet it was one to twenty-two. In all these cases the amount of urea varied inversely to the amount of nitrogenous food; so, of course, the uric-acid ratio varied."

Haig claims that meat increases both urea and uric acid, and its salts increase the acidity and cause the retention of uric acid. This seems to be an extraordinary juggling. He further says when uric acid has contracted the arterioles of the brain a timely dose of acid will "free the brain circulation from the power of the uric acid and produce an increase in its size and a free flow of blood from its vessels;" also that uric acid is always diminished before and during, and is greatly increased after, headaches, but he does not take into account the fact that during violent sick-headache patients are very apt to refuse food altogether.

In six cases in which I administered citric acid during migraine, the headache was promptly dissipated. I made a rather prolonged experiment on a patient who answered all the description of the lithæmic condition and lithæmic headache given by Haig. There was, on March 14th, severe headache for the entire day; the urine of the night before showed the ratio of uric acid to urea to be one to forty. During the day there was still a diminution in the uric acid, the quantity of urea remaining about the same. On the next night, however, the ratio of uric acid was increased very much, and the urea was much diminished, the ratio being one to forty, but on other occasions the ratio was enormously increased. On the day after the headache the toxicity of the urine was also examined. According to normal conditions, a rabbit should be poisoned by an amount of urine which represents from thirty-five to sixty cubic centimeters per kilogramme of rabbit weight, but measured by this standard I found in my patient a great diminution in the toxicity of the urine. In another typical lithæmic patient, a mild diet with lithia and Vichy greatly relieved the symptoms. During the headache, the ratio of uric acid to urea was one to twenty four. After improvement the amount of urea remained almost precisely the same, but the uric acid was diminished both absolutely and relatively, the ratio to the urea being one to sixty.—DOCTOR JACOBI, in *Medical Standard.*

GLYCOGEN.—It is yet a matter of doubt as to what glycogen or animal starch is formed from, and what is its ultimate fate. The view usually accepted is that both proteid and carbo-hydrate foods may act as sources of the compound. It is most abundant after carbo hydrate food, but also occurs in animals kept on a proteid diet,

originating then by complex intra-protoplasmic or metabolic changes. In the former case it is probably a storage of reserve carbohydrate, and the chemical processes involved are simpler. It has been proved by experiment that dextrose, levulose, cane sugar, and maltose increase the glycogen, whilst lactose and galactose do so very slightly if at all. The liver appears to form glycogen from those sugars which are converted into dextrose and levulose before they reach it. As to the ultimate fate of the compound, Claude Bernard held that its conversion is due to an enzyme, whereas recent writers attribute it to the vital action of the liver protoplasm. The conversion is divided into two periods, and the results of experiments by recent investigators agree in regarding sugar (dextrose) as the result of the disappearance of glycogen, and that this change is due to an enzyme that is present. It is not clear, however, that the whole conversion is accomplished by the ferment, for the vital action (generally a dehydration) of the cell was not reckoned with in these experiments. Recent research has shown that it may be possible to obtain sugar from proteid, but in no case as yet has dextrose been thus obtained, though laboratory experiments have shown that other sugars are obtainable.—Abstract of a paper by DOCTOR W. D. HALLIBURTON, F.R.S., in *Science Progress.*

TAPPING OF THE LATERAL VENTRICLES.—Doctor Frank, of Chicago, in the *Annals of Surgery*, reports two interesting cases in which the results obtained were sufficiently marked to justify tapping of the lateral ventricle, although both patients [illegible]tely died. One was a case of acute hy[illegible]entriculi resulting from severe injury t[illegible]ad, with multiple fractures to the b[illegible]h were made out post-mortem only. [illegible]rephining, the ventricle was opened [illegible]spirating needle corresponding to [illegible]American) catheter, and about th[illegible]es of fluid withdrawn. There wa[illegible]rable relief from the pressure sym[illegible] The second was one of idiocy follo[illegible]rops ventriculorum due to cerebro-[illegible]ningitis. As a result Doctor Fra[illegible] at the following conclusions:

For distention of the ventricle[illegible] simple or tuberc:ular meningitis, [illegible]peutic measure clearly indicated[illegible] things being equal, promises rec[illegible]

For effusion of the blood fro[illegible] disease, it offers a possibility of [illegible]

For abscess, it is immediately [illegible]tively demanded:

For effusion into the ventricles, from brain tumors, it may afford relief:

For chronic hydrocephalus, with moderate distention of the ventricles without enlargement of head, it may likewise be beneficial.

For chronic hydrocephalus, with great distention of ventricles, enlargement of head, etc., it will probably lead to fatal results.—*Boston Medical and Surgical Journal.*

PHYSICAL DIAGNOSIS OF GALL-STONE.—In the beginning, even before there is pain, there is a palpable tumor in the region of the gall-bladder which disappears as the stone passes into the intestines; the walls of the gall-bladder fall quickly together and a slight rubbing together of its walls can be felt; the attack ends with this sign, though the pain does not always end; sometimes a diastolic, rubbing sound is heard in the region of the gall-bladder, which disappears with the ending of the attack. After a prolonged attack a friction remains in the region of the gall-bladder which can be felt, but can be better heard with a stethoscope; during the course of a severe attack the liver increases in size, and can be felt below the margin of the ribs. One can exclude gall-stones when no stone is found in [illegible]ces, when t[illegible]s no friction in the [illegible]the gall-b[illegible]and, finally, w[illegible] blad[illegible]s not increased HAR[illegible]*Deutsche Medi[illegible] schr[illegible]

[illegible]UPTURE T[illegible]

In [illegible], when the [illegible]ra, only [illegible] li[illegible]ited; [illegible]nd bre[illegible] [illegible]able; [illegible]e fœt[illegible] [illegible]early [illegible] wh[illegible] [illegible] [illegible]Cer[illegible]

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Original Articles.

PERNICIOUS FEVER.*

BY DR. JOAO VINCENTE TORRES HOMEM.†

I. It is not very easy to say what is understood by the term "Pernicious Fever" in practical medicine. The most celebrated pyretologists are at variance on the question of the real signification of these two words —many confounding the *perniciousness* of the pyretological species with *malignity*. Castan‡, for instance, says that a pernicious fever or a malignant paroxysm is a quinine fever specially characterized by the immediate danger attending it.

Saint Vel judges pernicious fever to comprehend all febrile paroxysms which offer an exaggerated intensity of the phenomena of intermittent fever, or are complicated by grave symptoms in the chief organs of the body.§

For Dutrouleau, the type and form do not constitute the distinctive characteristics of pernicious fever; its characteristic is the special element of gravity to which has been given the name of perniciousness. The gravity of pernicious fever appears suddenly, and threatens life at once; it is often fatal in the first paroxysm, and very rarely exceeds the third. It is not only the instantaneousness of the peril which constitutes perniciousness; but also the kind of the phenomenization, when it is referred to one single symptom, or to a group of symptoms, independent of the fever proper, and, so to speak, added on to it. If malignant fever is a dog that bites without barking, pernicious fever is a dog that bites and barks at the same time. Pernicious malarial fever is frequently insidious, that is, may be pernicious and malignant at the same time.*

Pernicious fever, in my way of thinking, is an acute and very grave manifestation of malarial poisoning; as primary, it constitutes the sole disease which attacks the patient, preceded or not preceded by a mild pyrexia; as secondary or consecutive, it is intercalated in the course or at the termination of another morbid entity, and puts the patient's life in immediate peril. When this manifestation of paludism is attended with febrile reaction (pernicious fever proper, properly so called) the type of fever varies, as in simple cases—it is sometimes intermittent, sometimes remittent, sometimes continued; when there is no increase of temperature (pernicious paroxysm) the disease assumes the character of masked fever (*Febre larvada*).

In the one case as in the other, the perniciousness may consist either in the exaggeration of any one of the three stages of an intermittent paroxysm, complete and simple, or in the appearance of a symptom or a group of symptoms pertaining to an organ or an organic system.

II. In spite of the opinion of Morgagni, who dates the first idea of pernicious fever from Hippocrates, it seems beyond doubt that Torti was the first physician to describe this pyretological species. He divides the pernicious symptoms into two classes, corresponding to two very distinct states of the animal economy: that of *colliquation*, and that of *coagulation*.

Grimaud expounds these ideas of Torti adapting them to another hypothesis, considers these same pernicious sympto

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clinical study of the fevers of Rio de Janeiro related by Surgeon George P. Bradley, United Navy, and read before the Association of Surgeons of the United States, session

nte de clinica medica da faculdade do Rio de , membro titular da Academia imperial de na, membro correspondente da Academia as sciencias de Lisboa, Rio de Janeiro, 1877.

raité Eléméntaire des Fièvres, page 229.

raité des Maladies des Régions Intertropi- p. 79.

* Dutrouleau: Traité des Maladi péens dans les Pays Chauds, p. 211.

depending, some on a dominant state of *condensation* or *spasm* (coagulation), others on a state of *expansion* or *atony* (colliquation).

Baldinger considers the phenomena by which perniciousness is expressed in fevers, as lesions more or less profound of the chief faculties of vital force.

Alibert attributes them to a lesion more or less profound of the motor-sensory nervous system.

For Doctor Pidoux, perniciousness exists when at the same time one or many special functional disorders manifest themselves (the concomitance of which is not, however, constant or necessary). There is a *rupture of synergies* in the ordinary vital functions, a propensity to *direct vital extinction*, an insidious menace of death.

Doctor Bonnet, of Bordeaux, thus expresses himself in regard to the perniciousness of fevers:

The name of pernicious fever is given to intermittent fevers the intensity of which is so great and the course so rapid that they terminate fatally at the end of some paroxysms, unless means are employed to combat them.*

All these opinions, tainted with the merest vitalism, tend more or less to confound the perniciousness of malarial fevers with malignity, according to the ideas of Barthez. In the one as in the other there is a direct and profound attack upon the vital essence, a destruction of the radical synergies, an imminent danger of death under deceptive appearances not in accord with the reality of the peril.

This confusion clearly and evidently appears in the following words of Pidoux:

Perniciousness depends rather upon the *pernicious* nature of the *disease* than on that of the pernicious disorders which the affection of an organ whose action is indispensable to the actual preservation of life may produce in the economy. In certain cases of abnormal and intermittent gouty affections, the organs which suffer, and to which the chief symptoms are referred, are doubtless very important centres of life; yet such paroxysms rarely cause death, as the paroxysms of pernicious malarial remittent fever customarily cause it, even when they affect organs less indispensable to life; such are the stomach in the cardialgic pernicious form, the large intestine in the dysenteric, not to mention the ardent and algid, which attack no organ in particular. It is *malignity*, that is, the insidious imminence of speedy dissolution, sometimes even in the absence of fatal symptoms, that constitutes perniciousness, and not the intensity of the functional disturbance of this or that particular organ. The danger to the organism is rather in the profound blow to its vital resistance and its unity, than in the lesion of structure undergone by this or that tissue.

There are authors who regard the nature of perniciousness very differently, who do not believe in this supreme struggle between life compromised in its inmost essence and the morbific cause. Broussais, for example, starting from the assumption that intermittent and remittent fevers are a periodical gastro-enteritis, says that the pernicious differ from others only by the violence and danger of the congestions.

According to Maillot, pernicious fever is nothing but an irritation having for anatomical characteristic a hyperæmia of the nervous matter and its involucra, that is, of the cerebro-spinal axis.* He thinks, like Broussais, that the pernicious fevers differ from simple intermittents only by the degree of violence of the congestions, or by the importance of the organs upon which these congestions operate.

Says Ritschel:

I do not believe that perniciousness is a characteristic of intermittent fevers carried to the highest degree; I think it depends on complications foreign to the fever itself, arising at the same time or before it. When we say *pernicious* or *sub-continued* fever, the course or termination of the paroxysms is indicated, but not the cause of this course or termination. It would be exact to say an intermittent fever whose paroxysms are multiplied or approximated under the influence of the affection of this or that organ. When the organ is essential to life, when the cessation of its functions necessarily and promptly causes death, the fever is pernicious.†

Boudin, admitting various degrees in the *dose of malarial poison* in the manifestation of

* Bonnet, de Bordeaux: Traité des Fièvres Intermittentes, p. 51.

* Maillot: Traité des Fièvres ou Irritations Cerebro-spinales Intermittentes, p. 326.

† Compendium, tom. v, p. 328.

the various types of intermittent fevers, is inclined to attribute the perniciousness of fevers to the *greater quantity of miasma absorbed.*

At the bedside and at the autopsy no physician can embrace any of these theories exclusively: there are cases where the vitalists seem to triumph; others where the victory is on the side of the organicists. The exaggerated localizing ideas of Broussais and his disciples do not deserve at the present day the honor of serious refutation. To appeal always to a direct and profound attack on the essence of life, to a destruction of the radical synergies of the organism, is to ignore the numerous instances where organic disorders of a material nature, appreciable during life and verified after death, constitute the perniciousness of one or more paroxysms, and, by their extent as well as by the importance of the organ compromised, carry the patient to the tomb.

Boudin's opinion fails altogether in practice. How is it that, the circumstances of the poisoning being always the same for all, in some benign paroxsyms of intermittent fever occur, of quotidian, tertian, or quartan type, etc., and in others a masked fever; in these a bilious remittent fever, in those a pernicious? How explain the different degrees of violence of the disease—so different that here the first pernicious paroxysm is immediately fatal, there, in spite of the lack of suitable medication, a second and a third paroxysm supervene, and only after the latter the patient dies? In the study of a pathological case we ought always to keep in view two factors which are inseparable: on the one side the morbific cause, on the other the patient or the ground upon which the former has to exert its action. Now the cause in the case under consideration remains always the same, unchangeable; if it seems to vary in intensity in certain circumstances, it is because the ground in which it exercises its strength is more propitious, more favorable to it. We must not forget that each physiological individuality carries with it its personal aptitudes, a particular method of morbid susceptibility. The human being is gifted with a spontaneity and consequently with a variability of impression which outside morbigenic causes cannot explain. We ought then, in cases of pernicious fever, to seek in the conditions of the ground whose quality is so different, and not in the quantity of the seed, the reason which shall explain to us the gravity of the disease.

III. Pernicious fever is very frequent at Rio de Janeiro. It assumes numerous and varied forms: now it presents the frank intermittent type, now the remittent, now the continued; it manifests itself as a primary disease, or supervenes in the course or at the end of another morbid entity, especially of the acute inflammations (pneumonia or pleurisy). In many cases the first pernicious paroxysm is preceded by simple ones, well marked, incomplete, or masked; in others, the patient is attacked by a pernicious paroxysm while in the enjoyment of perfect health. A pernicious paroxysm is not always accompanied by febrile reaction; it sometimes coincides with complete apyrexia or with diminution of temperature.

It is not rare to observe a paroxysm of pernicious fever in a patient with malarial cachexia, whether at the height of intensity of this disease, or at the period of perceptible improvement. In the year 1872 there died in the Santa Izabel ward [of the Mizericordia Hospital at Rio de Janeiro.—Tr.], victim of a sudoral or diaphoretic pernicious paroxysm, a patient who had come from Maxambomba with very advanced cachexia (*vide* case 7); in 1875, another cachectic patient, coming from Itaguahy, was attacked by an ardent pernicious paroxysm, which carried him off when he was much better of the cachexia, when everything announced a complete recovery (case 9).

The same ætiological conditions which concur in the development of simple fevers, determine the appearance of pernicious fever. If many cases of pernicious fever are met with in the great malarial centres, they are observed as well in the heart of the city, assuming the same forms, characterized in the same manner, attended by equal risks, and demanding from the physician equal promptness and energy in the use of therapeutic means. It is in adult life and infancy, in the male sex, in the hot season, especially after a glowing sun succeeds copious showers, that cases of pernicious fever are most frequently observed in Rio de Janeiro.

IV. In the great majority of cases of pernicious fever, one predominant symptom re-

veals the presence of perniciousness; this symptom becomes noteworthy not only by its extreme intensity, but by its great variability as well — from this proceed the numerous classifications recorded in science.

There is no disease that presents itself under such different aspects as pernicious fever. It assumes all shapes, conceals itself beneath the most unaccustomed and singular masks, and passes through various metamorphoses, always disguising its true identity from the eyes of the inexperienced physician. There is no organ that may not in its turn become the theatre of its travesties; it is not rare to see all the great organic systems compromised at the same time in its violent paroxysms.

From remote eras pyretologists, wishing to furnish the practitioner with the Ariadne's clue to guide him in this interminable maze of varied morbid manifestations, have sought to group in a certain number of categories the varieties which naturally approximate by some common characters. But the multiplicity of new species which have been described since the immortal work of Torti, is a proof of the defectiveness of these classifications.

To demonstrate the impossibility of establishing a methodical classification of the very numerous and varied forms of pernicious fever, it suffices to present the classifications proposed, since Torti, as types of different groups. By these we see that the authors who wished to form distinct categories were forced, every one, in order to remain in accord with their personal observations, to create several new species. These species have been so multiplied since the last edition of Alibert's book (1820), that they reach today a considerable number.

Mercatus admitted six groups of pernicious fever founded upon the alteration of the humors. Casimir Medicus,* running through in succession the different parts of the body, notes all the periodical symptoms any one of them may present. Torti, without any doubt, was the first to attempt to establish a precise and methodical classification of the different forms which pernicious fever may assume.

He established two great divisions, comprising: one, the forms characterized by the existence of one predominant pernicious symptom, fixing the attention and constituting the whole danger of the disease (*Febres comitatæ*); the other, the forms in which this symptom is replaced by a conjunction of grave phenomena without any single one predominating, the fever tending strongly to be continued (*Febres solitariæ*, *Febres subcontinuæ malignantes*).

The first group comprises seven distinct species: First, choleraic, or dysenteric: Second, atrabiliary, hepatic, or hæmorrhagic: Third, cardialgic: Fourth, diaphoretic: Fifth, syncopal: Sixth, algid: Seventh, lethargic.

In the second group, which is not subdivided, Torti places the pernicious fevers which give rise to no predominant, well defined symptom, and which are attended by very varied phenomena.

Alibert, although he had adopted the bases of classification of the celebrated Modenese physician, added ten more species to the seven admitted by the latter in the group of *comitatæ*, as follows: First, soporose: Second, delirious; Third, peri-pneumonic or pleuritic: Fourth, rheumatic: Fifth, nephritic: Sixth, epileptic: Seventh, convulsive: Eighth, cephalalgic: Ninth, dyspnœic: Tenth, hydrophobic.

He also admits and describes the choleraic or dysenteric, the atrabiliary or hepatic, the cardialgic, diaphoretic, syncopal and algid of Torti (sixteen species), and says in terminating his classification:

It would have been easy for me to establish yet a multitude of other varieties of ataxic intermittent fever—for example, that variety the paroxysms of which are specially characterized by spitting of blood from the chest; another, in which the patient expels blood from the stomach by means of vomiting; another, in which he suffers great pain in the abdomen; another, in which the limbs frequently experience twitchings or partial contractions; another, characterized by paralysis, appearing only during the paroxysms, etc.—but it suffices to indicate them to the practitioner, who must always be very attentive in his endeavor to discover the innumerable metamorphoses of which these affections are susceptible.

Maillot, in view of the increasing multiplicity of new species, tried to approximate all the morbid individualities by means of

*Treatise on Periodical Diseases without Fever.

anatomical and symptomalogical analogies; and, starting from this principle, he established three groups, in accordance with the course of the phenomena:

First, of the cerebro-spinal system—comatose, delirious, tetanic, epileptic, hydrophobic, cataleptic, convulsive, and paralytic forms: Second, of the thoracic organs—syncopal, cardiac, pneumonic, pleuritic forms: Third and last, of the abdominal organs—the gastralgic, choleraic, icteric, hepatic, splenic, dysenteric, and peritoneal forms.

Haspel adopts Maillot's classification, but judges it to be incomplete, because it comprises only the cases of pernicious fever with organic lesion, real or apparent; he therefore adds two more forms, the algid and diaphoretic.

He does not attach great importance to classifications, and expresses himself very positively as regards this:

We attach to these purely formal distinctions only a secondary value, because they seem to us very artificial and insufficient to embrace all the cases occurring in practice; because ordinarily many of these forms present themselves at the same time or in succession in the same person; because there are pernicious fevers without any predominant symptom; and finally, because nature knows how to vary infinitely its pathological types.*

Haspel indeed is right. What is the real value of these classifications, divisions, and subdivisions? What indication do they furnish for prognosis and treatment? None. The prognosis is dependent on the pernicious nature of the disease, and not on the form it assumes. The treatment should be inspired by the basis and gravity of the affection, and the indications furnished by the form are secondary. The partisans of classification maintain that it clears up the diagnosis and makes more prominent the therapeutic indications, according to this or that group of symptoms. But the radical differences which separate, as to the secondary indications drawn from the form of disease, two pernicious paroxysms, to all appearance with identical manifestations, are a permanent obstacle to the realization of the second desideratum. In reality, to mark out invariable therapeutic rules according to the symptomatic form of a pernicious fever, is to run the risk of advising the same means in two cases apparently alike, but very distinct after being subjected to a rigorous and unprejudiced clinical analysis.

Even as regards diagnosis, the clinging to classifications of the varying forms of pernicious fever has its inconveniences, and at times very grave ones. However numerous, varied and minute these classifications may be, they will never embrace all the cases which may be met with in practice. Almost every day a new form is made known, not yet recognized and classified. Now if the physician, not finding in the classification he adopts the new example arising before his notice, forbears recourse to the heroic means which should save his patient, he sacrifices him irremediably with a clear conscience, because he does not recognize the peril surrounding him.

This is why I, excluding none of the classifications latterly admitted, adopt none to the exclusion of others; all are good when the cases observed can be conveniently included in their divisions and subdivisions; there is not one which is of service in the complex, undefined, unusual cases, and in those marked by a variety of symptoms—and these cases are sometimes seen in Rio de Janeiro.

I have observed in ten years (1866–75) sixty-eight cases of pernicious fever—thirty-one in the wards of the hosptal, fifteen in the infirmary of Nossa Senhora da Ajuda, and twenty-two in private practice. From the notes and case-papers which serve me as a guide in the study of the present paper, it appears that the forms assumed by the disease in these cases were the following, in order of frequency: Algid, eleven cases; comatose, nine; cerebro-meningeal, five; convulsive, four; neuralgic, four; delirious, three; sudoral, three; pleuro-pneumonic, three; ardent, two; hæmoptoic, two; choleraic, two; rheumatic, two; peritoneal, two; gastralgic, two; tetanic, one; epileptic, one; asthmatic, one; syncopal, one; hydrophobic, one; paralytic, one; hepatalgic, one; aphasic, one; indefinite, six.

In the six cases in which the form of the paroxysms can be referred to none of the divisions recognized in pathology, there was a mixture of symptoms furnished by the

* Haspel: Maladies de l'Algérie.

various organs or organic systems, which appeared irregularly in the course of the disease.

From the table of statistics here set forth, and which sprung from my own observation, it may be deduced that the algid, comatose and cerebro-meningeal forms are the most frequent in Rio de Janeiro; the first especially predominates the others very sensibly. Consulting in this regard the opinion of several well known physicians who have an extensive practice in this city, they are unanimous in considering the algid form as the commonest of the forms of pernicious fever observed in practice; they agree also as regards the frequency of the comatose form, and the rank due to it in our statistical charts.

According to my way of thinking, one or many grave symptoms, furnished by an organ or a system of organs, attended or not by febrile reaction, whatever may be the type of fever, may constitute a pernicious paroxysm.

Algidity is a frequent termination of many pernicious attacks, whatever be the form to which they belong. Doctor Dutrouleau very justly says:

The algid state appears to be the most legitimate expression of the action of the malarial cause upon the human organism, and is perhaps the pathological centre whither converge the other pernicious species; hence it follows that it should appear alone in many cases, and that in others where it has been disguised it will reappear as soon as the special symptoms of these fevers have been modified. The truth is that algid fever exists everywhere as a pernicious species, and the algid state is the most frequent complication or termination in fatal cases of pernicious fever, whatever may be their form.

In the opinion of some physicians of Rio de Janeiro, prominent among them the respected and distinguished Baron de Lavradio, a species of lymphatitis which prevails in this city and is attended by excessively grave ataxic symptoms constitutes a form of pernicious fever, which they term lymphatic.

These practitioners believe that the local phenomena, usually of little severity, as well as the general, almost always very serious, depend on a malarial miasmatic poison, which must be combated energetically and perseveringly by the salts of quinine.

In 1874 a young candidate for a degree defended this opinion with much talent in his inaugural thesis, which is without doubt the best notice we have of this subject.*

For a long time I have been a declared opponent of this view, both in my lectures at the medical school and in some articles written at the request of my pupils and included in their theses, as well as at the bedside. The serious lymphatitis observed here, and which at times appears in little epidemics, is caused either by some one of the local conditions which usually excite inflammation of the lymphatic vessels, or by a general poisoning of the system produced by the mephitic emanations originating in the great centres of organic matter in a state of putrefaction. Whether in the one case or the other, the entry into the current of circulation of lymph altered in consequence of the inflammation of its containing vessels, produces a change in the blood (lymphæmia) which gives rise to the ataxic symptoms constituting the entire gravity of the disease. When the lymphatitis is caused by mephitism, *i. e.*, when it is the symptomatic expression of a phytozæmia, the sulphate of quinine, given at the very beginning, gives good results, as we observe in all pathological cases due to such causes, whether vegetable, animal, or mixed. The patient recovers—the primary poison is neutralized; but if lymphæmia is established, either because the quinine salts were administered too late or in insufficient doses, or because the lesion of the lymphatic vessels has become general and profound, the quinine medication, far from being of advantage, becomes on the contrary very harmful, because it aggravates the ataxia and favors the appearance of adynamia. In this stage of the disease, tonics, antispasmodics and diffusible stimulants are alone of benefit, the only remedies in which the physician should place any confidence. Observation, then, demonstrates that in the pernicious lymphatitis of Rio de Janeiro the sulphate of quinine is contra-indicated as soon as the symptoms constituting the perniciousness of the disease appear. In the pernicious fevers it is exactly the reverse; as we shall see further on, the graver the symptoms indicating perniciousness, of whatever nature they be, the larger should be the doses of the

*Doctor Carlos Claudio da Silva: Das Lymphatites Perniciosas que reifiao no Rio de Janeiro.

salts of quinine, and the more prompt and evident are the triumphs of this medication.

If the lymphatitis in question were a pernicious form of malarial poisoning, it would be frequently observed in the localities where miasmatic affections are endemic, in the great centres of infection, where the forms of pernicious fever are numerous and varied. Nevertheless, whether in foreign countries where there are epidemics and endemics of malarial affections, or at certain points in the interior of the province of Rio de Janeiro, where sulphate of quinine is an indispensable remedy in the treatment of every disease, malignant lymphatitis, with the characteristics distinguishing it here in the city and making it almost always fatal, is entirely unknown. Can we allow that the lymphatic form of pernicious fever is peculiar to the city of Rio de Janeiro; that it has never manifested itself in other localities; that the most renowned pyretologists have never noticed it; that it does not figure in any of the recognized classifications? Assuredly not.

At the season when the grave lymphatitis is observed with us, few cases occur of pernicious fevers, and above all, of simple intermittent. Now, to admit a malarial poison revealing its existence in the lymphatic sys tem, we should be compelled to admit also a special predilection of this poison for certain determined epochs, exactly when it avoids the organs it most commonly attacks—which is an absurdity.

The pernicious fevers, whatever may be the group to which they belong, whatever even may be the species observed, present such a noteworthy diversity, such an unusual lack of harmony between the symptoms which denote them, that to recognize a first paroxysm, in cases where no attacks of simple intermittent fever have preceded, the practitioner must be very sagacious and experienced. In the numerous cases of grave lymphatitis I have observed, terminating fatally for the most part, after the second or third day of the disease, sometimes later, nervous ataxic phenomena occur, always the same, which grow worse gradually and progressively until the patient succumbs. The less intense the local symptoms are, the more migratory and erratic the inflammation of the lymphatics, the graver are the general symptoms, the more profound the ataxia of the nervous system. If the local condition were the symptomatic expression of a pernicious attack, would not the phenomena indicative of the perniciousness of the disease be observed from the first day? Certainly they would. Does not the appearance of these phenomena at a time posterior to the lymphatitis, clearly indicate that they are consecutive to that lymphatitis, that they do not depend upon the same cause that produced it? Without doubt; all the more since no one disputes that traumatism, of whatever nature, provoking inflammation of the lymphatic vessels, the supervening lymphatitis as well is followed by the gravest symptoms of ataxia, unless terminated by suppuration. These are the reasons which lead me not to admit that the morbid process in question is a pernicious form of malarial poisoning.

V. When a pernicious attack supervenes after a certain number of simple intermittent paroxysms, the latter at times keep getting graver until true perniciousness appears; again, the paroxysms, which were complete and regular, become incomplete, anomalous, and insidious; there are cases in which the pernicious paroxysm explodes without any anterior phenomenon indicating it, without the physician being able to foresee it; there are cases in which the malarial poison manifests itself at once by a very grave paroxysm, with no preceding simple attacks; cases in which this first paroxysm is so violent that it kills the patient in a few hours.

Pernicious fever presents no phenomenon worthy of note as regards febrile heat, appreciated by the thermometer. The thermometer does not lend the physician the least assistance in this group of pyrexias; it will hardly indicate, as in benign cases, what the type of fever is.

One of my most remarkable pupils, writing in 1875 his inaugural thesis on the value of the thermometer in the diagnosis of the fevers which prevail in Rio de Janeiro, recorded in this splendid and conscientious work the fruit of his minute and careful investigations. In spite of his brilliant talents, and the efforts he made to arrive at some positive and satisfactory result, he expresses himself in the following manner:

While the pernicious pyrexias are those which most demand of the practitioner a prompt diagnosis, for the employment of vigorous and exact treatment, they are also those in which the thermometer possesses least value.*

In the so-called ardent species, admitted by Dutrouleau and other practitioners as a distinct form, the excessive elevation of the thermometer (106–107.4–107.8°) will serve for the admission of this form in case of previous diagnosis of malarial fever. This occurred to the hospital patient in 1875, who died of an ardent pernicious paroxysm supervening in the course of malarial cachexia. This patient was much better, and about to leave the hospital, when the interne on duty found him at eight o'clock in the morning with a temperature of 106.1°, although the evening before he was apyretic and doing well. There being no lesion to explain so violent a febrile reaction, the general symptoms which accompany the prodromic fever of the exanthemata not being present, and it being a case of a person coming from Itaguahy with malarial cachexia, the diagnosis of ardent pernicious fever offered no difficulty. At five o'clock in the evening the temperature reached 107.3°, and at two the following morning the patient died. The autopsy demonstrated existence of the visceral lesions produced by malarial poisoning.

In the algid form, attended or not by profuse sweating, the thermometer reveals a temperature very near the normal or a little above, and in this latter case thermic exploration explains the internal sensation of intense heat experienced by the patient, obliging him to keep uncovered.

VI. In the *algid* pernicious fever, the most frequently observed with us, sometimes a few shiverings occur at the beginning of the attack, sometimes a slight chill, and sometimes the initial stage of the paroxysm is entirely lacking; the symptoms of algidity, in a large number of cases, supervene insidiously. The patient's face grows pale, his features are contracted, cheeks hollowed; his eyes are sunken, sight darkened, pupils dilated; the lips become livid, the voice weak, low, tremulous and sepulchral; the skin, especially at the extremities, goes on cooling gradually until it becomes icy; when the algidity has invaded the entire skin, a clammy sweat appears, drenching the patient; and it is in this case that the observer's hand, applied to any region of the algid body, especially to the forehead, nose, and upper or lower extremities, experiences a very unpleasant sensation, like that experienced on touching marble or a corpse.

The patient complains of burning heat consuming him inwardly, is very thirsty and begs urgently for water; the pulse is very concentrated and rapid (125 to 135 per minute); the axillary temperature taken by the thermometer is 99.5°, 101.5°, 101.2°, rarely 97.8° when the paroxysm is about to terminate fatally. The tongue becomes cold, retracted, and a little tremulous, the epigastrium and hypochondria painful, the belly tympanitic, and the urine is suppressed. Respiration, which at the beginning of the paroxysm appears natural, becomes later difficult, oppressive, uneasy, attended with deep sighs. In the midst of all this array of symptoms, when life is ready at any moment to be extinguished, the intelligence preserves its normal integrity; the patient, overcome by sad apprehensions, considers himself lost, bewails his situation, but is not delirious.

If the paroxysm ends fatally, the symptoms I have just described increase, the diaphoresis becomes profuse, the patient's face becomes hippocratic, the heart is enfeebled to such a degree that its beat is hardly perceptible, the pulse becomes thready and extremely rapid, the voice almost extinguished, and life ceases suddenly from cessation of the heart's action.

If the paroxysm is to pass off, even though another supervene, the circulation grows active, heat little by little is distributed regularly over the whole body, the pulse grows stronger and less frequent and contracted, the face becomes more flushed, the look more expressive, the urine reappears abundantly, the belly becomes flaccid and painless, and at the end of a few hours the patient recovers a certain degree of comfort, scarcely interrupted by the sensation of extreme weakness which he feels, and which lasts for many

* Doctor Domingos de Almeida Martins Costa: Do Valor das Investigacoes Thermometricas no Diagnostico, Prognostico é Tratamento das Pyrexias que Reinao no Rio de Janeiro (1875), p. 39.

days, even when radical cure is impending. If a second paroxysm is to follow, the prostration in which the patient is left after the first is very marked; his physiognomy still expresses discouragement and terror; the pulse, albeit fuller, stronger, and less compressible, yet keeps a certain frequency which inspires suspicion; the tongue is covered with white fur; the liver is congested and painful, and the spleen as well.

In one of the cases observed by me in hospital practice, in spite of the flattering condition of the patient after a first algid pernicious paroxysm, an intense pain was noted in the left hypochondrium, without increase of volume of the spleen (splenalgia), which led me to presume that another attack would appear. In fact, despite the vigorous treatment employed, my presumption was changed to reality; the second attack supervened, less grave and threatening than the former, it is true, but attended with one peculiarity that disheartened me—the patient vomited all he swallowed; it was then impossible to give him quinine and other remedies by the stomach. I had recourse to the endermic method, to enemata, and to frictions, and, thanks to these means of absorption, succeeded in saving him.

In the *choleraic* and *dysenteric* forms, species of the algid genus, the same phenomena of algidity are noted, more or less marked, especially in the former; besides these phenomena, others appear, identical with those of Asiatic cholera or severe dysentery. In the first instance, together with the choleraic algidity, vomiting and diarrhœa are observed, repeated frequently and abundantly; the matters expelled from the stomach and bowels are riziform; there is cyanosis, the skin loses its normal elasticity, cramps appear, the face becomes hippocratic, the urine is suppressed, and the unhappy patient is reduced to the state of a moribund in a few hours.

The identity of the symptoms of a pernicious paroxysm of the choleraic form and those of true cholera is oftentimes such that the differential diagnosis between the two diseases will be impossible if we have for basis only the nature and intensity of the symptoms themselves It is in the previous history of the patient, in the course followed by the morbid phenomena, in the very important circumstance of the absence of a cholera epidemic, and in the state of the liver and spleen, that the physician will find sufficient light to guide him.

In the *dysenteric* form, there is either a pronounced lowering of bodily temperature, or well marked febrile reaction, which is very common at the outset of the disease. With the cooling of the extremities, or with the febrile heat, coincide the symptoms of a serious dysentery. There are catarrhal, bloody, frothy, and fœtid evacuations; these evacuations are very frequently repeated, and are preceded and accompanied by violent colic and severe tenesmus; every time the patient seeks the stool he expels a small amount of fluid, becomes weaker, loses courage; and is often attacked by faintness, vertigo, and even syncope.

In this form the liver usually becomes much enlarged, and the right hypochondrium grows tense, prominent, and painful. The dysenteric form of pernicious fever is very rare at Rio de Janeiro. It appears from the statistics presented that in ten years I did not chance to observe a single case.

The *sudoral* form is at times combined with the algid, and only differs from it because the diaphoresis manifested during the paroxysm is so copious that the patient's garments, pillows, blankets, and the mattresses of the bed are completely inundated; there are cases in which the perspiration wets the floor of the room. At other times the profuse perspiration does not coincide with algidity; on the contrary, though the patient sweats excessively, the thermometer indicates increase of heat, and the surface of the body remains hot; the sweat, instead of being cold and clammy (as happens when there is algidity), shares the heat of the skin.

If the patient, in this condition, does not change his linen with due care, if he is not shielded from draughts, the evaporation of the sweat which bathes his skin, depriving the latter of a great amount of its heat, causes a very unpleasant sensation of cold, and may excite a general chill nearly approaching algidity.

Many celebrated pyretologists claim that the algid and sudoral or diaphoretic forms of pernicious fever consist in the exaggeration

of the first and third stages of a simple intermittent paroxysm, just as the ardent form is the exaggeration of the second.

Case 1.—Adriano, Portuguese, thirty-two years old, a mason's servant, living in the Rua de Don Manuel, entered the Santa Izabel ward [in the Mizericordia Hospital at Rio de Janeiro] on the 2d August, 1868, and occupied bed No. 9. For a week he had daily paroxysms of intermittent fever, characterized by the three stages, and a facial neuralgia, appearing regularly at 1 P.M. and ending at 7 P.M. A purgative of castor oil, taken on the night of the 29th July, and some pills, probably of sulphate of quinine, prescribed by an apothecary, were the only curative means adopted by the patient. Having entered at nine o'clock at night, the physician on duty prescribed one gramme of sulphate of quinine, a mixture of sulphuric ether and tincture of valerian, and sinapisms to the lower extremities.

Aug 3d. *Present Condition:* Dorsal decubitus; expression disturbed, evincing anxiety and terror; voice weak and muffled; algidity very marked in all parts of body except chest, where there is some warmth; in extremities, upper and lower, nose, ears, and chin, greater cooling noted than at other points of skin. Forehead, chest, and forearms bathed in fœtid and clammy sweat. Pulse small, compressible, 120; respiration uneasy and frequent (28); absence of physical signs on auscultation and percussion of thorax; intense thirst; tongue cool and furred; breath cold; pain in epigastrium and hepatic region; liver a little enlarged; spleen normal; belly retracted; no diarrhœa or vomiting; urine scanty, high colored, and turbid; mind clear.

℞ Hydrolate of canella, 180 grammes.
Bisulphate of quinine, 2 grammes.
Carbonate of ammonia, 1 gramme.
Elixir of paregoric, 8 grammes.
Syrup of gum Arabic, 30 grammes.
Essence of peppermint, 4 drops.

Take two tablespoonfuls every hour.

Two clysters of sulphate of quinine, of six decigrammes each: Sinapisms to upper and lower extremities: Two broths with rich wine.

At 5 P.M. patient was better: more warmth in extremities, sweating had ceased, face more flushed, and pulse fuller. The two clysters had been retained. The patient presented the acoustic symptoms of well marked cinchonism. He continued to take wine alone, a tablespoonful every two hours, till the following day.

Aug. 4th. Face more flushed; respiration easier; still coolness of extremities, especially of upper, but much less than day before; pulse fuller, 112; little thirst; tongue more coated, but temperature normal; less sensitiveness in gastro-hepatic region; liver still enlarged; constipation; urine more abundant, and still with sediment. Intense neuralgic pain in right side of face.

℞ Valerianate of quinine, 2 grammes.
Ext. hyoscyamus, 0.20 gramme.
Ext. thebaic,* 0.10 gramme.
Soft ext. cinchona, 0.60 gramme.

Div. in pil. xij. Take one every two hours, and with each pill two tablespoonfuls of *Agua Ingleza.*†

A purgative enema, and after its action two enemata of sulphate of quinine, each of 0.60 gramme: Three broths with good wine.

Aug. 5th. Marked improvement. Perfect distribution of surface warmth; pulse 92 and fuller. Appetite good. Patient purged largely by enema; retained quinine enemata, and had taken eight pills to hour of visit. Deafness of cinchonism well marked. Neuralgic pain much decreased in intensity; liver less enlarged; urine abundant and normal.

Prescribed: Four pills quinine valerianate: Agua de Inglaterra: Anodyne liniment to foment right side of face: Two broths with wine; half a cup of coffee.

From the 6th the patient was kept wholly on the Agua de Inglaterra; on the 12th he was discharged perfectly cured.

Case 2.—José Lopes Curvello, Portuguese, aged nineteen, turner's apprentice, entered bed No. 20 of Santa Izabel ward on the 13th of July, 1875, affected with a severe bronchitis.

On the 23d, when he was almost cured, and hardly coughed a little in the early morning, he was seized at 6 A.M. with marked chilliness, and at the nine o'clock visit was found in the following condition:

Great prostration, labored respiration, uneasiness, restlessness; algidity of upper and lower extremities, no perspiration; pulse 110, small and hard; axillary temperature 38.6° (101.5° F.); tongue cold, and thinly coated at base; pain in lower part of left hypochondrium, excited by pressure beneath false ribs; liver and spleen normal; constipation; suppression of urine. No sign on percussion and auscultation of respiratory and circulatory organs.

*Opium 1 part, distilled water 12 parts, to make soft extract.

†[Agua Ingleza, or Agua de Inglaterra, a proprietary remedy much used in Brazil, is the property of a Portuguese family named Castro; it is a mixture of cinchona bark with the must of grapes, and the compound fermented.]

Ordered: One gramme of sulphate of quinine at once, same dose to be repeated four hours after: A diffusible stimulant mixture composed of ether, tincture of valerian, canella, and musk: Sinapisms to upper and lower extremities: Broth and rich wine.

At 5 P.M. the grave symptoms of the algid attack had disappeared; patient had urinated freely at 3 P.M., and the urine contained a little albumen.

On the 24th, at the visiting hour, were observed merely an increased coating of tongue and persistent constipation. Ordered: 12 decigrammes of sulphate of quinine in two doses: Mixture continued, at longer intervals: A purgative enema of castor oil and the electuary of senna: Broth, wine, etc.

The doses of quinine were diminished gradually during the following days, and the patient was discharged on the 29th.

Case 3.—Luiz Gomes Pereira, Portuguese, aged twenty-eight, employé in the brewery of the Rua da Guarda-Velha, entered Santa Izabel ward on the 9th August, 1874, bed No. 3. He had been attacked by a febrile paroxysm on the 7th in the morning, characterized by intense chill, fever and sweat, with the occurrence at the same time of great pain in the knees, without swelling of these articulations.

He took no remedy, and on the 8th felt well, merely retaining a bitterness in the mouth and loss of appetite. Early on the morning of the 9th, was awakened by a second chill, attended by the same articular pains, by acute pain in the region of the liver, and by vomiting. At 7 A.M. the physician called to see the patient considered him to be in a very serious condition, and advised him to enter the hospital, where he arrived in a hammock a little before ten o'clock.

Condition on arrival: Face hippocratic; profound adynamia; complete prostration; voice weak, like that of cholera patients; general algidity, profuse clammy sweat bathing the whole surface—the hand applied on any part of the body experiences the same sensation as if it touched a wet corpse. Axillary temperature 35.8° (96.5° F.); pulse 132, thready; tongue cold and dry; breath cold; devouring thirst; the patient complains of a burning sensation seated in the epigastrium, and constantly uncovers himself; acute pain in hepatic region—pressure and percussion in this part extort groans from the sufferer; no vomiting or diarrhœa—the patient only vomited when he had the chill at 4 in the morning; liver a little enlarged; spleen normal. Hiccough from time to time. Urine suppressed from beginning of paroxysm; bladder entirely empty. Respiration frequent, labored, interrupted by deep sighs. Pain in knee-joints, without swelling or reddening of skin, excited specially by passive or active movement of the same.

℞ Sulphate of quinine, 2 grammes.
Valerianate of quinine, 1 gramme.

Mix, and divide into three equal doses. Take one every three hours in a wineglass of Agua de Inglaterra.

℞ Carbonate of ammonia, 1 gramme.
Tincture of canella, 4 grammes.
Paregoric, 8 grammes.
Ethereal tincture of phosphorus, 10 drops.
Peppermint-water, 120 grammes.
Syrup of orange-peel, 30 grammes.

A tablespoonful every hour.

Sinapisms to the thighs, legs, feet, arms, and forearms.

This energetic treatment was regularly followed under the superintendence of eight pupils, who visited the patient hourly in details of two, until 3 P.M., when death occurred, there not having been time to give the third dose of quinine.

Autopsy (eighteen hours after death): Rigor mortis very marked. Injection of arachnoid; some punctation in the white substance of the cerebral hemispheres. Congestion of base of both lungs. Heart bleached without appreciable lesion. Some greenish fluid in stomach; hyperæmia of mucous membrane of this organ. Liver increased in size, turgid with blood, of a deep red color. Spleen much softened, and of natural size. One ounce of muddy urine in bladder. Kidneys normal.

Case 4. – Julio Boutty, Frenchman, journeyman watchmaker, entered the hospital of Nossa Senhora d'Ajuda on the 21st of September, 1873. From the 17th he had begun to lose appetite, have headache, and feel prostrated during the night. On the 20th, at 6 P.M., had a severe chill, followed by fever and sweating; took three Dehaut's purgative pills, and dieted. On the 21st at 7 P.M. had a second chill, attended with great præcordial oppression, and followed by uneasiness and indefinable general malaise; these symptoms becoming more and more aggravated, at ten o'clock he came to the hospital. He was ordered a stimulant draught, two grammes of sulphate of quinine in two doses, sinapisms to the extremities, and a purgative and antispasmodic enema.

Condition on Sept. 22d, 11 a.m.: Face profoundly changed, and bathed in cold and clammy sweat; great agitation, the patient moving about constantly in bed, always changing his position and uttering deep sighs. General algidity, only on the forehead some warmth noted; axillary temperature 37.4° (99.3° F.); pulse 110 and small. Tongue cold and much furred; great thirst and anorexia.

Epigastric pain, increased by palpation. Vomiting, which had appeared after swallowing the second dose of quinine, is excited whenever the stomach receives remedies or broth. Liver a little larger than normal; spleen within its physiological limits; belly meteorized. Two large evacuations were induced by the enema of the evening before. Urine scanty and high colored, without albumen. Respiratory system sound.

Prescription: Murray's liquid magnesia with elixir of paregoric,* sulphuric ether and tincture of nux vomica, in spoonful doses: Sinapisms to epigastrium and extremities: Three small enemata containing each one gramme sulphate of quinine, to be given three hours apart: Broth and wine.

At 7 P.M. the vomiting had completely ceased, algidity and agitation less pronounced, temperature 37.6° (99.6° F.); pulse 110. The interne on duty repeated the two last enemata, adding to each fifteen drops of Sydenham's laudanum, as the others had been expelled as soon as given. The patient continued to take Port wine.

Sept. 23d. No vomiting; warmth reëstablished in all parts except hands and forearms. Axillary temperature 37.6° (99 6° F.); pulse 100. Tongue still coated, of normal temperature. Had a large evacuation at 6 A.M. No deafness of cinchonism.

Ordered: Three small enemata containing each six decigrammes of sulphate of quinine and ten drops of laudanum (to be given three hours apart): The same mixture alternating with wine: Stimulant friction, with camphorated alcohol, of upper and lower limbs.

The patient showed great improvement on the 24th, and kept on recovering gradually, being discharged on the 4th October. The doses of quinine were diminished progressively till the 27th September, when they were entirely suspended.

(*To be continued.*)

THE RELATION OF GYNÆCOLOGY TO PSYCHIATRY.†

BY C. B. BURR, M.D.

Our knowledge of the outer world, like our knowledge of ourselves, is obtained through nervous action; and there are two kinds of memory which make this knowledge available for the necessities of the individual, namely: The memory of percepts derived through the medium of the senses; and the memory of self, or organic memory.

The organic memory is of the highest possible interest to the neurologist and the alienist; through it, phenomena at first largely mental (the result of education of the centres of memory and volition), but eventually becoming almost purely nervous (automatic), display themselves. It is the possession of the organic memory, for example, that enables a manual exercise once learned to be carried on through force of habit and without the intervention of volition except in the act at its inception. The young maiden who sits at the piano idly strumming the keys, her thoughts intent upon the far-away object of her choice, is carrying on through the organic memory an instrumentation which has been through a long course of education slowly and with difficulty acquired. Her thoughts are not upon her music, though harmonious strains issue from the piano in consequence of the force applied to the keys. The organic memory enables one to walk, to ride horseback and adapt himself to sudden changes of position, to manage the bicycle, to do the countless muscular acts acquired by practice. Once learned, they proceed without the necessity for expenditure of volition.

Through the organic memory also the personality is built up. In health there come to the brain, from every organ and tissue of the body, sensations, which are registered in the organic memory. The sum total of these sensations gives to the individual the sense of self—the sense of existence, of life, of vigor—the *Ego*. In health these sensations do not come into consciousness independently, but in disease sensations from an affected organ may manifest themselves with painful and vivid directness. The "sound mind in a sound body" acquires new significance when it is understood that the personality is built up from bodily sensations hoarded by the organic memory.

It follows logically from the foregoing that change in nervous sensation from a part would be apt to modify the personality; and this the study of mental disease abundantly

* [Extract opium, Acid benzoic, Ol. anise volat., ää 3 grammes. Camphor, 2 grammes. Alcohol (60°), 650 grammes.]

† Read before the Michigan State Medical Society.

confirms. In tuberculosis the impediment to breathing and the impairment of the heart's action occasion the belief that poison is administered, or that noxious gases are introduced into the room for the purpose of depriving the patient of life. I have known one who was suffering from chronic peritonitis to attribute the painful sensations from the abdomen to the presence of a rat within, and one having bloating of the abdomen from obstruction of the bowels to believe himself a woman and pregnant. In melancholia due to sexual excess the lack of conscious virility (from atony of the sexual organs) gives rise to the belief that impotence is present. Indeed, the emotional feeling accompanying nervous depression occasioned by prolonged licentiousness may proceed to such an extreme that the patient, to escape future trouble, may follow literally the scriptural injunction and remove the organ that offends.

It is quite necessary to discriminate pathologically between cases such as the above, and others where local symptoms, if in existence, are expressive of the general physical letting-down from causes inherent in the nervous system. One of the most common experiences encountered in the care of patients suffering from climacteric insanity, for example, is the presence of visceral illusions and delusions. At the climacteric period the nervous constitution is subjected to extreme strain, and inherent weaknesses, instabilities and lack of potentiality are apt to obtrude themselves. The digestive organs are wanting in nervous tone and are held by the patient accountable for the bad feeling which is experienced. Indigestion, a result of this lack of nerve tone, is falsely accused of being the cause of the mental bad feeling, which it did not create but merely intensifies. In some cases nervous conduction is so much interfered with as to call up in the patient's mind the delusion that the abdominal organs are all gone and there can be no movement of the bowels, or that food cannot be digested or absorbed. In paretic dementia (general paresis), anæsthesia of an extremity may give rise to the delusion that it is dead or frozen, or that it is glass and will break.

Delusions based upon a diseased state of organs, which diseased state affects the personality, and delusions arising from central causes having in their expression some local reference, furnish two distinct and definite varieties, though differentiation is unquestionably difficult in some cases. Medically speaking, such differentiation is relatively unimportant, the therapeutic indications in the two classes of cases being practically the same. When it comes to the application of surgical measures, however, to fail to discriminate between them is to make an unpardonable blunder. To illustrate: A patient upon whom Doctor Manton operated some months ago for the removal of a large uterine fibroid, believed herself then, and still believes herself, a man. There is no doubt that this change in personality arose from the presence of the uterine tumor, and its extirpation was undertaken for this reason, and the further reason that it seemed a menace to her future physical well-being. The delusion—that of change in sex—appeared at the time the uterine tumor began to make encroachments. The removal of the tumor was apparently justifiable and expedient, both upon psychiatrical and gynæcological grounds. Quite different, however, are the surgical aspects of another case which recently came under my observation, and in which the patient, now in the adolescent period of life, fancies herself "marked." The "marking" is in the direction of lack of sexual capacity — an affection which she ascribes to the fact that her mother and father were separated shortly after their marriage and saw each other only after long intervals. Here is a sexual delusion, as in the case just alluded to. In both cases the delusional belief implies a marked disturbance of the personality. In the one case the delusion was based upon a diseased condition; in the other it was the result of the patient's feeble nervous inheritance. Local examination of the patient brought to light the existence of an undeveloped uterus. Growth and development here have not kept pace with other organs in the system, and a deranged personality, displaying itself in the direction already mentioned, is the result. Many cases like this, where the nervous constitution is feeble, show mental breaking-down at the period of adolescence, insanity finding its expression in sexual delusions, but

delusions independent of any diseased condition of the pelvic organs. Here the maternal instincts and natural longings, asserting themselves, acting upon a feeble mental organization, give color to the delusions.

It is important, therefore, in studying the relations of gynæcology to psychiatry, to make distinction between disease of the pelvic organs as a cause of insanity, and mental disease not so caused displaying itself prominently in delusions referable to the sexual apparatus. In the first instance the insanity may be benefited by the relief of the local condition. In the second, gynæcological treatment, or any attention whatever to the sexual organs, merely intensifies in the mind of the patient the existing morbid impression. I cannot concur in the too frequently expressed view that a large percentage of mental trouble in women is due to local disease and amenable to gynæcological treatment. Indeed, I am thoroughly convinced that grave harm to patients results from this wholly unwarrantable conclusion. Too much cannot be said in opposition to frequent or promiscuous operating upon the pelvic organs purely for the relief of mental conditions; but that disease of the sexual system, as disease elsewhere, gives rise to modifications in personality and produces or intensifies insanity, is indisputable and should receive recognition. While in the case of a seriously diseased uterus or ovary I should most certainly recommend operation, both for the relief of pain and discomfort, and for the possible benefit to the mental condition, I should not approve of directing treatment to some relatively unimportant local condition, and I cannot approve of the removal of the normal ovary for the relief of insanity merely because the mental disturbance of the patient displays itself largely in sexual perversion or sexual delusions. Acting upon a similar principle, I should recommend the removal of the testicle that was diseased, while I should regard it a surgical misdemeanor to remove the normal testicle merely because of the existence of bad habits, which in many instances are attributable simply to the lowering of tone of the nervous system from causes apart from the sexual apparatus. The allegation was formerly made, and with much justice, that too little attention was devoted to the physical condition in insanity, and that too little effort was made to correct diseased conditions, particularly gynæcological. At the present time this allegation cannot be made. Many large public institutions have a consultant in gynæcology, who, if broad-minded, not swayed by surgical fashions, and unhindered in view by a narrow horizon, is able to coöperate with the alienist in the relief of those cases where gynæcological measures are of importance. In an appointment of this nature the old objection to treatment directed to the sexual organs by the attending physician of the asylum is met and obviated. It was once held, and with some reason, that local treatment given by the attending physician to patients under his charge was apt to result in the confirmation of preëxisting delusions, or in the appearance of new ones directed against the physician himself. This objection, valid or invalid, is no longer of weight where a non-resident consultant—one who has no intimate acquaintance with the patients—attends to cases of this nature.

In the Eastern Michigan Asylum, where a considerable number of cases have been operated upon for relief of diseased condition of the pelvic organs, but two in the history of the institution have been subjected to surgical treatment with the idea in view solely of benefiting the mental condition. In both cases we had prominently in mind the establishment of an artificial menopause, the arrest of dementia, and the relief of intense nervous excitement which was coexistent with the function of menstruation. In one case the patient, from being degraded and unspeakably vicious in habits, has become fairly quiet, self-respecting, and industrious. In the other case improvement also seemed to result, but, she having been discharged, the progress of her case for the last two years is not learned. Both cases have been published in the biennial report of the Eastern Michigan Asylum.

From a psychiatric point of view, gynæcology has a legitimate sphere of usefulness in the cure of insane conditions, but it can hardly be denied that claims have been made in its favor by the enthusiastic that results do not justify. Gynæcological operative procedures have indeed been in danger of suffering dis-

credit by reason of extravagant assertions in respect to their curative value. In gynæcology, as well as in other medical and surgical fields, a danger menaces that the pendulum may swing too far in the direction of active interference—this as a reactionary movement from its hopeless inactivity through so many years of estrangement of gynæcology from its sister branch psychiatry. That such an unfortunate result may not happen, I aver that necessity exists for the alienist, the gynæcologist and the neurologist to meet upon some common ground to deter mine to what extent gynæcological treatment and operations upon the insane are justifiable. My own creed would be something like this:

Let no patient suffer from local symptoms that can be relieved by treatment:

Beware lest in applying treatment a delusional condition be intensified. In such an event, let medical efforts be directed to the nervous system strictly, the probability being that with improvement in nerve tone the local symptoms will disappear or become unimportant:

Operate only for diseased conditions previously diagnosticated, and for the same reasons that would obtain in patients not insane:

Never under any circumstances operate to unsex a recent case of insanity, with the idea of healing the mental condition, except there be present disease of the uterus or appendages previously made out and not amenable to other treatment.

Eastern Michigan Asylum,
Pontiac, Mich.

CHRONIC HEADACHE RELIEVED BY CORRECTING LATENT OCULAR MUSCULAR IRREGULARITIES.

BY JOHN S. OWEN, M.D.

For several years it has been conceded by the general medical practitioner that the majority of cases of chronic headache have their origin in some abnormal condition of the eyes or the ocular rotary muscles. With a view to increasing the evidence of the truthfulness of this concession, I have selected from a large number examined during 1892, nine cases that give a history of persistent headache, extending from a period of twelve months to fifteen years. Two of these complained of "weak eyes," whilst seven *made no complaint whatever of eye trouble;* all of them, however, complained of "severe headache."

These cases may in all respects be classified as typical functional nervous diseases, and the result of treatment will, I think, justify the suggestion that all cases of persistent or chronic headache should be carefully examined for latent refractive and muscular errors by a competent oculist, and whatever defect found be properly treated—I say carefully examined, because I am satisfied many examinations are too hurried and brief to enable one to arrive at a definite conclusion, especially regarding latent muscular incoordination. The proper correction of these latent malformations of the ocular rotary muscles will give relief to many sufferers where medical treatment has been useless.

The muscular defects, in my opinion, exist during youth, but may not be manifest in the form of nervousness or headache until maturity or after some severe illness—the illness being regarded as having induced the nervous condition, and the latter in turn deemed the cause of the headaches. The following, however, tend to prove that the real aggravating cause in certain particular instances is in the eyes in the form of latent strabismus or heterophoria.—The full amount of the latent strabismus is given by the number of the prism that measures it, but it must be borne in mind that the actual deviation of the two eyes is one-half the amount as indicated by the prism, the prisms being numbered according to the angle which the surfaces form, and not by their refractive power as is the case with convex and concave lenses.

Case 1.—Miss T. D——, æt. 18, school-girl; complained of severe daily headache experienced during the past year; general health and bodily functions normal. Examination of eyes revealed 13° latent strabismus, causing the right to turn upward (right hyperphoria) and the left downward (left cataphoria). When in use both eyes were apparently perfectly normal, but to the constant effort necessary to keep them straight and working together was attributed the headache. February 10th a graduated operation was performed on the left inferior rectus for the purpose of straightening that eye, and seven days later the eye was straight. On the 27th

was performed a graduated tenotomy of the right superior rectus to correct the remaining seven degrees of deviation of the right eye. Ten days later the eyes were absolutely straight and could be kept so without any effort. August 10th the rotary muscles were perfectly normal (orthophoria) and no deviation could be induced by any of the usual methods. The patient declared she had experienced no headache of any nature since her eyes were straightened, and that she also enjoyed excellent health. April 5th, 1894, over two years after the operations, she reported perfect health and no return of headaches. Examination by card test showed eyes to be absolutely straight.

Case 2.—Miss D. E——, æt. 32; schoolteacher; complained of chronic headaches of the left side of her head for about five years; otherwise no ill health. Had been under treatment four and a half years. and had taken "bromides" for the last eight months, all without permanent benefit; as soon as the medicine was discontinued the headaches would return. The only abnormal condition discoverable was 6° deviation of the left eye upward (left hyperphoria). A graduated tenotomy of the left superior rectus was performed March 26th, and four days later the headaches ceased, and twelve days after operation the eyes were absolutely straight—not one degree of latent strabismus could be found. January 10th, 1894, nearly two years after treatment, examination showed the eyes to be still absolutely straight. She had experienced no headaches except occasionally after being up late at night, and in consequence of loss of sleep.

Case 3.—Miss B. M——, æt. 22; office clerk; complained of dull continuous headaches for the past five years, but was otherwise in good health. Had a pale, delicate appearance, but claimed to never have had any severe illness; suffered from nervousness which was attributed to "heart difficulties" and "stomach troubles;" had been treated for these for nearly two years without relief. After examination I concluded that the heart and stomach disorders arose from nervousness, and the latter and the headache from 22° latent convergent strabismus (esophoria). April 14th, tenotomy of the left internal rectus was made, which corrected eleven degrees of the convergence, and three weeks later a similar operation on the right internal rectus, which restored the muscles and eyes to normal and entirely relieved headache. Three months afterwards she had entirely recovered from the headaches, nervousness, and "heart and stomach troubles." May 15th, 1894, there was an absolutely normal condition of health and eyes, not a particle of deviation being present. She confessed to having a slight headache for one day about once every four weeks, but which did not trouble her in the least.

Case 4.—S. G——, æt. 31; book-keeper; had complained of severe headaches for about fifteen years. These were supposed to be due to constipation arising from torpidity of muscular coat of the rectum. All treatment failed to afford permanent relief, and the headaches did not cease. I found each eye was inclined to turn outward 9° (exophoria). The left external rectus was clipped April 27th, and on the 12th of the following month the right external rectus was incised; one week after the second operation all headaches stopped and the constipation became a disorder of the past. The following summer the patient stated he had never been troubled with a headache or constipation since eyes were straightened, and examination by card test failed to develop any deviating tendency.

Case 5.—Miss H. M——, æt. 39; correspondence clerk; complained of severe headache beginning every Saturday afternoon and continuing until Sunday evening, which had persisted for fifteen or twenty years while doing any kind of close work; no other complaint. Examination revealed eyes inclined to turn out each 7°. On May 7th a graduated tenotomy was made on the right external rectus, and on the 4th of the following month a similar operation on the left external rectus, resulting in perfectly straight eyes and cessation of the headaches a week later. December 9th, 1893, she said she had not suffered a single headache of any nature since her eyes were straightened.

Case 6.—M. F——, æt. 20; student; complained of severe dizzy spells, nervous prostration in warm weather, and frequent severe headaches during eighteen months; had taken "bromide" for the past six months, but in spite thereof health and strength were gradually failing. Examination revealed latent convergent strabismus of 19°. Tenotomy of the right internal rectus was performed June 30th, and eleven weeks afterwards a like operation on the left eye. Owing to the fact of residence in an interior town he was not seen again until July 31st, 1893, when the rotary muscles were found to be absolutely normal, and the patient stated that, although he continued his studies at college, he had no return of headache or dizziness. and experienced only a slight depression of strength, attributable to hot weather.

Case 7.—Mrs. W. J——, æt. 23; housewife; complained of suffering for seven or eight

years with chronic headaches recurring at intervals of about every four days and continuing for two days. Twenty two degrees of latent convergent strabismus was the only abnormal condition discoverable. The right internal rectus was severed July 14th, and two weeks later the left was clipped. October 26th there was entire cessation of headaches—the eyes were perfectly normal, with no inclination to deviation. Though this patient has never since been heard from, I believe it safe to conclude the disorder has not returned, as she was requested to notify me promptly in case of such event.

Case 8.—Miss B. M——, æt. 27; clerk; complained for six years of weak eyes and daily headaches beginning about 3 P.M. and continuing until about midnight. Various forms of medication had failed to relieve, except temporarily perhaps, and the stomach was becoming very sensitive; general health very good, except slight indigestion of two years' standing; indeed, all the functions were normal with the exception of a latent divergent strabismus of 16°. A graduated tenotomy was made on the external rectus of the right eye July 10th, and four weeks later on the left external rectus to correct the remaining eight degrees of divergence. August 21st, the ocular muscles were equally balanced and the daily headaches had disappeared. January 24th, 1894, she reported absolutely perfect health, and there was no inclination of the eyes to deviate in any direction although they were subjected to most thorough tests.

Case 9.—Mrs. M. L——, æt. 34; housewife; complained of weak eyes and frontal headache recurring about every ten days and continuing from one to three days, for six years; had tried every "headache cure" advertised, without effect, and was finally persuaded to have her eyes examined for glasses; 46° of latent convergent strabismus existed. An operation on the right internal rectus, July 12th, corrected one-half the defect, and three months afterwards the remaining convergence of 23° was corrected by tenotomy of the left internal rectus; prior to second operation the frontal headaches were very much relieved but had not entirely disappeared. March 14th, 1894, she reported herself as entirely free from headaches, and tests failed to develop deviation in any direction.

I may state that these nine cases had no other abnormal condition aside from those given, and that a general examination of the ears, nose, teeth, throat, lungs, heart, digestion, etc., was made, thereby excluding all other causes, the eyes having been examined last. No medicine of any kind was administered. The method of exercising the muscles with prisms was entirely unsatisfactory, and not one of the patients could wear a pair of 1° prisms—the lowest partial correction.

The diagnosis of latent strabismus by the card test is an easy matter, and may always be relied upon. Briefly it is as follows: Have the patient sit so that a bright light strikes the face; for this purpose I prefer to have him looking out through a window. Then he should look directly ahead at some object twenty feet or further away. The oculist can then stand four or five feet in front and a little to one side of the line of vision, and carefully note whether the head is erect and the eyes centred on looking directly ahead. When the head and eyes are properly adjusted the operator should seat himself with back to window, face to face with patient. A card or piece of paper about the size of the ordinary postal card should now be held over one eye for several seconds—the longer the better; while the eye is covered, if the muscles are equally balanced (orthophoria) it will remain in the same position, but if there is any tendency towards deviation (heterophoria) it will be drawn in that direction by the shorter or stronger muscle. It is unnecessary, however, to watch the eye while it is covered, because movement may not be detected without difficulty, the best plan being to watch closely the moment the card is removed and placed over the other eye. If the eye which has been covered is not inclined to turn in any direction, there will not be any movement when the card is removed from before it and to the other eye; but if, when uncovered, it is seen to move *from* the nasal side in order to again fix upon the object, latent convergent strabismus (*esophoria*) is present; if the eye moves *from* the temporal side, latent divergent strabismus (*exophoria*) is indicated; and if it moves from below (*i. e.*, upward), *cataphoria*, and if from above (*i. e.*, downward), to the line of direct vision, *hyperphoria*. These terms indicate the direction in which the eye is turned while it is covered, and not the direction in which it moves when it is uncovered. I consider this card test fully as reliable a means of diagnosis as any of the more complicated methods, and for this reason: When an eye is

covered there is no nervous effort sent to it, because there is nothing to see, consequently the muscle of accommodation and the rotary muscles are in a state of relaxation. When the muscles are in this relaxed condition and they are not equally balanced, the eye will be drawn aside by the shorter or stronger muscle. The card may be moved from before one eye to the other as often as desirable or until a diagnosis is arrived at. Occasionally it may be necessary to hold the card before an eye twenty to thirty seconds and then move it slowly to the other, care being taken to watch the eye the moment it is uncovered. One eye should always be covered by the card when making the examination.

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VITALITY OF LONG-KEPT SEEDS.

At a late meeting of the Royal Botanic Society the question was raised regarding the vitality of long-kept seeds. The Secretary declared fifteen years was the utmost limit to which he had undoubted evidence of a seed being kept and then germinating—he scouted as alike unscientific and untrustworthy the idea that seeds found with Egyptian mummies had ever developed. Sir Benjamin Ward Richardson corroborated the Secretary's statements, adding he had repeatedly planted seeds found with mummies, but had never been able to secure their germination.

AMERICA AND THE PLAGUE.

The recent arrival at one of the Pacific ports of a vessel from Hong-Kong reporting a death from the plague while *en route*, raises the question of the possibility of an invasion of America by the dread malady. Probably the majority of people deem the plague a far-off contingency - a disease indigenous to the Orient—but the increased ease of communication between the "uttermost parts of the earth" is quite capable of overturning all preconceived ideas regarding epidemiology. The slums of San Francisco and the Mexican ports would certainly afford excellent opportunities for any filth disease.

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Editorial.

A MONSTROUS EVIL.

Seventy years ago tight dressing was confined exclusively to the waist; to-day it is carried up to the chest, and down as low as possible on the hips, and on every side can be seen the sad results in the multitude of deformed and unwomanly women.

In the symmetrical, well formed woman, she whose prototype is the Venus of Milo, it will be observed the hips are much broader in proportion to the breadth of the shoulders than they are in the opposite sex. By means of the modern corset, however, the development of the waist and abdomen is prevented, and even the muscles which extend to the bones of the pelvis are thus bound down, limiting development in this region. Many of our young women are practically devoid of glutei, and of that breadth of pelvis which is essential not alone to the beauty of womanhood, but to the function of maternity. Such deformity is far-reaching in its consequences: the intestines are crowded down upon the pelvic contents, and there is no freedom possible to the organs constituting the reproductive apparatus. Little wonder, then, that American womanhood is continually suffering from displaced uteri, dislocated and diseased ovaries, hæmorrhoids, and other diseases peculiar to this portion of the economy, all of which entail unnecessary suffering and danger during parturition, to say nothing of the multitude of abortions and premature births. To the practice of lacing may chiefly be credited the craze that makes of every cross-roads doctor a cœliotomist.

The old corset was bad enough. The new one is a thousand times worse. The old "bodice" repressed the mammæ, and prevented the development of the muscles of the back, rendering the latter inactive and so

causing the wearer to "feel as if she were falling apart" when this linen and steel-ribbed contrivance was removed. The whole distortion seems to be the result of an attempt to copy French fashion-plates and elongate the waist; and to-day we see women pass along the street whose forms are more or less exposed owing to the style of wearing-apparel, and it is observed that they are entirely lacking in that rotundity and swelling which is one of the charms of the sex. Chinese foot-distortion is no more idiotic, and not nearly so far-reaching in its ill effects as this pernicious attempt to imitate fashion-plates, that makes of the "female shape divine" only a weak copy of the male, rendered doubly hideous by clothing adapted to a nobler and far more beautiful form.

THE BLACK PLAQUE.

A terrible epidemic is now raging in China which has not before appeared in that country since 1873, when it was not nearly so far-reaching in effects. It is reported to be very similar to, if not identical with, the great London plague of 1665.

The malady made its first appearance in the Province of Kwan-tung in the latter part of March, and spread with frightful rapidity among the lower classes until the number of deaths had swelled into many thousands. Some statements put the mortality at six hundred thousand, and recent dispatches state that not less than seventeen hundred have succumbed in the city of Hong Kong alone since the 1st day of May last. Fortunately, Europeans residing in the stricken region have not (with few exceptions) fallen victims to the disease, doubtless on account of their superior appreciation of sanitary science. Last advices state that the death rate in Hong Kong is at present nearly one hundred per day.

A correspondent resident in Canton defines the malady as "an acute contagious fever with distinct epidemic tendency, characterized by extreme debility and development of buboes, carbuncles, and furuncles. It is extremely severe, and usually fatal in three or four days."

The history of the plague since the great epidemic at Constantinople in the year A.D. 542 is pretty well known. It appears to have prevailed in some portions of the Old World almost constantly until 1844, when it apparently disappeared. It existed in Europe alone over a thousand years, yet it was thought to have been only a scourge peculiar to the Middle Ages and that higher civilization had stamped it out. Strange to say, it appeared spontaneously in Arabia in 1853 and destroyed many thousands of lives, even sweeping away entire nomadic tribes. In 1858 it appeared in mild form in the Turko-African provinces, and was universally prevalent, from Egypt to Morocco; and in 1871 a wave swept over Persia and a portion of hither India. Twice since it has broken out spontaneously in Arabia, in 1873 and in 1877, the latter epidemic spreading to Russia and following the course of the river Volga, mysteriously disappearing in the far north of Asia in 1879.

Exactly in what the plague consists seems to be a matter of some doubt. This much is evident, however, that it is a filth disease and may speedily be stamped out by means of proper hygienic and sanitary processes—this was shown by the prompt suppression of the epidemic at Astrakhan in 1879 by the rigid enforcement of quarantine and proper measures. There seems to be, moreover, a relation between it and cholera, as both are usually most prevalent during the same year, and require much the same surroundings for development and propagation.

A CRITICISM ON THE PHARMACOPŒIA.

It almost appears as if the United States Pharmacopœias, past and present, were especially constructed in a way to afford the greatest amount of trouble and bother to the medical man. Except in the matter of extracts, solid and fluid, there appears to be no uniformity regarding vegetable products; no attempt to assimilate the form of production or reduce the same to simplicity. With the continually growing materia medica the memorizing of doses cuts no inconsiderable figure with the profession. A complete dose list means a volume of inconvenient size to carry—any volume is inconvenient, for it means fumbling pages perhaps in the presence of

patients, who immediately believe the prescriber is lacking in knowledge.

In the last issue of the *Bulletin of Pharmacy* is an editorial protesting against a class of galenical preparations which are in part a cause of the trouble above outlined. It is only necessary to say this reference is aimed at the U. S. P. tinctures:

Two tinctures represent 5 per cent. drug.
One represents 7 per cent. drug.
Thirteen represent 10 per cent. drug.
Nine represent 15 per cent. drug.
Twenty-two represent 20 per cent. drug.
One represents 35 per cent. drug.
One represents 40 per cent. drug.
One represents 50 per cent. drug.

This list comprises simple tinctures only, and does not include the various compound tinctures prepared from two or more drugs.

When to this lack of uniformity is added the further objection that the majority of tinctures are not convenient for administration—that they usually afford a small proportion of drug in a large proportion of alcohol—that the latter may not only influence the action of the drug but may also preclude combination with water or other vehicle—it may well be asked, by what means have tinctures contrived to hold their ground so long despite their objectionable features and their failure to present a single advantage not possessed by fluid extracts? The answer is simple. The majority of doctors now in active practice received their training in the days of the old-time tincture. Many practitioners yet look upon fluid extracts as an innovation. We may even assert without fear of contradiction that a great number of physicians refrain from discarding the tincture and cling to this antiquated galenical simply because they know from long habit the dose of the tincture, but have actually forgotten the dose of the drug! They have learned to prescribe so much tincture; to adopt the fluid extract would mean an effort of memory! We have seen too many such instances to waste any time wondering why doctors *will* persist in using tinctures when a better preparation—more concentrated, uniform, and convenient—may be had for the asking.

Let us here make clear that our contention has nothing to do with the method of manufacturing tinctures—whether from the crude drug or from a standard fluid extract. We favor the second method heartily, and have previously stated in these columns our reasons for so doing. Cogent grounds for changing our opinion have yet to be presented to us. On the method of making tinctures differences of opinion will prevail, and we have no quarrel with the pharmacist who feels he must follow not only the spirit but the narrow letter of the Pharmacopœia in making his tinctures. We content ourselves with pointing to the rapidly growing number of pharmacists in this country and in Europe—notably in France—who employ fluid extracts as the source of their tinctures, and whom it would be absurd to charge with indifference regarding the quality of the preparations they dispense.

But that is neither here nor there. It is the tincture itself which has outlived its usefulness, and which should now be relegated to the attic of the obsolete. Medicinal preparations have enormously increased in number during the past generation; the memorizing of doses has become a formidable task, and it is high time that something were done to facilitate this work by wiping out a class of preparations whose members vary in a manner that has neither rhyme nor reason.

Finally, while we also think tinctures have outlived their field of usefulness, we would ask: Why, when the Pharmacopœia professes with each revision to aim at advance, do not its compilers consider these galenicals, which lack uniformity alike in manufacture and dosage?

THE HEIGHT OF ABSURDITY.

When a medical individual begins to talk shop in periodicals devoted to general literature, he generally succeeds either in injuring himself or bringing discredit upon the profession. A notable example of this is a recent contribution by the "Great Retired" to the *North American Review*, in which he discusses the matter of physicians' fees. We have no idea that the gentleman in question intended to be funny, but *Life* seems to have found him exceedingly amusing, and remarks as follows:

He alludes enviously to the practice of the Sicilian brigands, who, when they have captured a rich prisoner, put a fancy price, say $20,000, upon his nose, and allow him to choose between the loss of his feature and his money. Surgeons, Doctor * * * intimates, sometimes have rich men's noses and even more indispensable organs at their mercy. In this country, at least, they are hindered by public opinion from turning their opportunities to anything like as good pecuniary account as the under-practitioners of Trinacria.

The "Retired" draws a parallel between the lawyer and the physician, remarking that the latter rarely ventures to charge his richest patient a sum at all comparable to that demanded by the former for expert advice. All this is very true, but, as *Life* justly remarks: "If all physicians charged their wealthier patients as Doctor * * * thinks they should, they would presently have only poor people to work for."

Possibly *Life* has had dealings with the "Only Great" and feels very sore over the fact, for it adds:

It is possible, of course, that the brigand industry in Sicily is even more profitable than Doctor * * *'s own practice, though that is not likely, but it should be considered that being a brigand is neither respectable nor safe, and in every calling extra hazards or drawbacks constitute a valid claim for extra pay.

We wonder whether the editor of *Life* has been trephined for chicken bone or mulcted through treatment by organic extracts? In any case he seems to feel he has good grounds for complaint.

Finally, the author of "organic extracts," President of the Columbia Chemical Co., etc., would appear to be in financial straits, judging from the song sung in the *North American Review*, and the advertising contracts with the lay press made by his concern based upon the scratch-my-back-and-I'll-scratch-yours method; and yet it was the proud boast of his friends in 1874 that he *must* be "eminent," because his practice netted an income of "sixty thousand a year." Verily "how are the mighty fallen!" and where is the "eminence" connected with Testine, Ovarine, etc.?

INDIANS AND TUBERCULOSIS.

At the recent session of the Colorado State Medical Society, Doctor H. R. Bull presented a paper upon this subject that was based upon material gathered during five years' experience in charge of the Indian school at Grand Junction. Doctor Bull declares Indian children are much more subject to tuberculosis than are those of white parentage, and that it is especially apt to develop as a sequel to *la grippe* or insignificant local suppurating maladies. It is, moreover, very acute and rapid in course, and no treatment has ever been of avail that did not include an almost constant out-door life in the mountains during the summer.

Mortality, moreover, he estimates to be in direct proportion to the amount of climatic change between the reservation and the school.

THE ATHEISM OF DOCTORS AND LAWYERS.

The medical profession is frequently accredited with atheistical tendencies and leanings. Be this as it may, such is usually a matter of conscience with the doctor; but with the lawyer is apt to be a matter of dollars and cents, as witness the following:

A woman who recently died in Buffalo, N. Y., left the sum of $1,600 to be expended for "the repose of her soul." Now come certain attorneys into court, the legal representatives of the loving (?) children, praying that the bequest be set aside on the ground that "the existence and immortality of a soul have never been proved," and that even if they had, "a soul has no standing in court." They further verbosely, technically, and wickedly allege that "the existence of a soul is not subject to proof," and that "an immaterial and immortal essence cannot derive any benefit from the expenditure of any material money." What next?

EDITORIAL NOTES.

Soaps.—

Soaps are the result of the action of alkalies upon fats. There is generally, even in the best soaps, a greater or less amount of alkali above that required to transform the fat, and it is this free alkali that (whatever its detergent qualities may be) is prejudicial to the skin, as it not only acts as an irritant but combines with and removes the fatty perspiration. By its continued action the skin is rendered harsh and dry.

One may guard against the danger that attends, in some cases at least, the free use of soap, in either of two ways: by using only articles made by reputable firms, or by employing a soap which has an excess of fatty

matter in its composition, like that known as "Castile." — Nevertheless the ideal superfatted soap is yet to be made.

Cheap soaps, while they may appear all right to the senses of sight and smell, are generally highly perfumed expressly to deceive the buyer as to their quality, and to hide the presence of free alkali. The use of such is always to be discouraged.

Bacteria in Eggs.—

A Doctor McClintock has discovered "hen-fruit" may swarm with microbes, being infected, he presumes, "before they are laid."

No doubt this is a valuable contribution to science, but we must not fail to "give honor where honor is due." Three years since the notorious "Prince Michael" discovered that "every egg is a scorpion," and consequently refused to longer feed his deluded followers upon such unhealthy and obnoxious food. Mike's laboratory is now located at Jackson, Mich., where he may be addressed by anxious scientists.

The Gold Cure in Canada.—

Recently the College of Physicians and Surgeons of Quebec prosecuted one "Father Murphy" for having conducted an unlawful practice under the name of "Gold Cure Institute." His defense was that the "Institute" was managed by a duly registered practitioner; but the evidence conclusively proved this was only a "cover," and that the injections were actually made by the Reverend Father himself or his clerical subordinates. His Reverence was accordingly fined fifty dollars, with the option of prison for sixty days.

A Medical Centenarian.—

Doctor Salmon, of South Wales, the oldest doctor and Freemason in the British Empire, attained in April last the ripe age of one hundred and four years. He joined the Masons eighty years ago, and is now the *doyen* of that body as well as of the Royal College of Surgeons; has been Justice of the Peace for forty-six years, and is also Deputy-Lieutenant for Glamorgan. Within two miles of Doctor Salmon's home resides a lady but one day younger.

Eureka!—

There is yet hope for the toothless, and the dentist is circumvented. One White, in Great Britain, has invented a "Patent Masticator," which appears from the cuts exhibited in the *Lancet* (London) to be a cross between a currycomb and a pair of garden shears. Imagine one working this machine at the table, when previous preparation of food by a sausage machine would be equally as desirable and palatable without violation of any of the proprieties.

Old Age and the Death Rate.—

Only 906 persons in a million die from senility, while 1,200 succumb to gout, 18,400 to measles, 27,000 to apoplexy, 7,000 to erysipelas, 7,500 to consumption, 48,000 to scarlet fever, 25,000 to whooping cough, 30,000 to typhoid and typhus, and 7,000 to rheumatism.

The averages vary according to locality, but these are deemed pretty accurate as regards the population of the globe as a whole.

Heat Stroke.—

Is most prevalent in Bombay and Calcutta, and almost unknown at Belem (Para) at the mouth of the Amazon and within a degree and a quarter of the equator. Nearly every steamer plying on the Red Sea has deaths on board from this cause, and in 1874 the *Liverpool* lost three officers and twenty-one seamen during a single passage between Aden and Port Said.

Medical Literature of the United States.—

In the United States there are published two hundred and thirty-four medical journals, of which fifty-two belong to New York State, twenty-one to Pennsylvania, fourteen to Ohio, and sixteen to Missouri. West of St. Louis alone there are twenty-five journals. The enlargement of the scope of medicine and the development of specialism are responsible for much of the increase.

Curiosities of Cholera.—

It is a fact of the various cholera epidemics that have swept Europe, that in every one the mortality at Rome and Madrid was greatest on Sundays, at London and Berlin on Wednesdays, and at Paris on Saturdays.

At present, in St. Petersburg, where the death-rate is upwards of one hundred daily, the mortality list is increased one-fourth on Saturdays.

A Wise Decision.—

The Supreme Court of Indiana affirms that the physician must not disclose what he learns in the sick-room, no matter by what method he acquires his knowledge. In the case in point he was forbidden to testify as to the mental condition of his patient at the time when she made her will. Only the patient, or in case of death his legal representative, can remove this seal of secrecy.

Prehistoric Trephining.—

Victor Horsley asserts trephining was done in the Stone Age, and has presented representations of prehistoric skulls to prove that the owners underwent and survived this delicate operation 5,000 years ago, when there were nothing better than bone drills and stone saws as instruments.

The Ravages of Typhoid.—

Of every 10,000 deaths in the United States, 300 are attributable to typhoid. It is even more fatal in Norway, where ten per cent. of deaths are from this cause. In spite of terrible sanitary surroundings, the cities of Corea seem to suffer very little therefrom.

"Heart Disease."—

Is said to be most common in England, and least prevalent in Mexico. Liability to death from this cause in Europe and America occurs most frequently between the ages of thirty and forty.

In Memory of a Great Man.—

Recently was placed in the Zoölogical Institution at Jena, Prussia, a life-size marble bust of Professor Ernst Haeckel. Scientific men from all parts of the world attended the unveiling.

Horse Sense.—

When a man has exhausted argument to support a deceit, he resorts to wagers and vituperation. Bluff is an old game, but usually a losing one.

Items and News.

The Death-Wound of Carnot.—

The death of the President of France by a stab of the liver is an instance of rare wound occurrence. We do not at present recall a similar case of fatal termination. Rupture of the liver from contusions and perforations of the substance of the organ by bullets is not very uncommon, but deep knife-wounds inflicted by an assassin are almost unheard of. It is quite evident that the wound in the case of the lamented victim was fatal from the moment of its infliction. The cablegrams state that the substance of the organ was penetrated, as shown by the autopsy, to the depth of five inches, that the aortic (evidently the cava ascendens) vein was wounded, and that two quarts of partly clotted blood were found in the peritoneal cavity. The distinguished victim died from the shock of sudden internal hæmorrhage. Almost immediately after the thrust the mortal character of the wound was clearly indicated by the quick collapse. The futility of performing laparotomy for the arrest of such a condition was demonstrated by the results in this instance. It is still a question whether or not it is advisable to explore such wounds while the patient is in a condition of profound shock. If the hæmorrhage from a wounded liver is of sufficient magnitude to induce rapid collapse, it seems quite clear that exploring the wound in the vain hope of securing a large vessel, only adds to the gravity of the situation by intensifying the shock and proportionally reducing the ultimate chances of the patient. If, on the other hand, the bleeding is small enough to be controlled by tamponing the liver substance, it will do no special harm if left to itself. It is quite probable, however, that the bleeding was very rapid, that syncope occurred very quickly, and that the hæmorrhage had ceased of itself long before death. At the worst, it was a mercy that it was so soon over.—*Medical Record.*

Journal of American Medical Association.—

At the San Francisco meeting a committee was appointed by the Editors' Association to define the exact position of the journals in their relation to advertisements. The controversy on this matter is full of interest to the profession, and if the American Medical Association is to be the judge it necessarily must begin with its own journal, which is or is not in reproach according to where the line is to be drawn. One thing is certain: no matter what action is taken on the standing "ad" of the proprietary medicine, the

war will be carried into Egypt on those journals that do not find a proper place for their advertising reading-notices. There is an abuse here of the profession, and many are the plans held out to curb it. It was resolved in the Pharmaceutical Section to have an analysis made and the formula published of all proprietary medicines. Another scheme is to advertise to the profession at large the exact legal status of a trademark and of a patent, with full explanation of their bearing in medicine. This is simply a move in the line of educating the profession to its interests.—*Omaha Clinic.*

The Animal-Extract Business.—

The animal extracts, manufactured by the Columbia Chemical Company, and, according to the latest advertisements, under the supervision of Wm. A. Hammond, have apparently now become common newspaper patent medicines. They are advertised widely in the public press, special attention evidently being given to testine. We are not sure whether or not Hammond's company guarantees to the public that testine is a sure cure for lost manhood resulting from early indiscretion; but, if not, certainly the anxious young victim and old reprobate can find what they seek among the other nostrums. Thus ends another lesson which the profession seems slow to learn. At present we are wondering what such men as Doctor C. L. Dana, of New York, think of the use of their writings to advertise Hammond's stuff. Hammond, if we are correctly informed, is still connected with one of the New York post-graduate schools. But perhaps this is part of his revenue schemes also.—*Indiana Medical Journal.*

Rights of Criticism.—

The *Saint-Petersburger Medicinische Wochenschrift* informs us that Professor Jaeger has lately prosecuted his colleague, Professor Manassein, in the civil tribunal. The former complained that Professor Manassein, in his journal, *Vratch*, called him a notorious charlatan or else a veritable lunatic because he recently asserted it was possible to recognize the nationality, sex, habits, and maladies of individuals from the odor of their excretions. M. Manassein, for his defense, maintained that in the incriminated article he had merely done his duty as a medical man and a medical journalist. The tribunal took this view of the matter, and acquitted the defendant, to whom the public thereupon accorded an ovation. [Perhaps there may be a vacancy in the Grand Academy of Lagado (see "Gulliver's Travels"); if so, the learned professor should have a first-class chance.]—*Provincial Medical Journal.*

Too Much Science in the Beer.—

A good tale is told of the late Professor Tyndall about the time he was a master at Queenwood College, Hants. The village innkeeper had a capital tap of home-brewed old-fashioned ale, which the educational staff much fancied. Years passed on, but the scent of the roses remained, and when the Professor ran over to look once more at his starting-point in life, he went down for a glass of the well remembered brew. "Simpkinson," said he, after a delicious draught, "I never had any beer like yours since I went away." "No, sir; nowadays they puts too much science into beer, 'stead of malt and hops."—*Food and Sanitation.*

A Convincing Proof.—

Therapeutic frauds cannot outlive a puny infancy. A continued demand for a pharmaceutical preparation is proof positive of its clinical value.

Therefore, when the physician insists that his prescriptions be filled with products from the laboratories of well known, long-established manufacturing chemists, he may feel assured they possess all the virtues claimed for them.—*Medical Brief.*

Circumcision.—

M. Letourneau, at a session of the Paris Society of Anthropology, traced the origin of circumcision back to the custom of the Egyptians, who in war practiced it—a sort of scalping of the vanquished—a custom still prevailing among the Abyssinians. From this it developed into a ceremonial rite of homage to God—a symbol of a more *complete* sacrifice that preceded it.

Editorial Change.—

After eighteen years of editorial work Doctor J. F. Baldwin has retired from the *Columbus Medical Journal*, being succeeded by Doctor R. Harvey Reed and an associate staff. The *Journal* appears in a new dress, and is in every way most creditable to the new management.

Very Satisfactory.—

This is how the well known Prof. Valledor speaks of the recent Medical Congress on Tuberculosis held in Paris: "Synthesis of the Congress: Unfounded theories; empty affirmations; conclusions *Nil;* practical results equal *Zero.*"

Death Test.—

Life may be considered extinct if, when a needle is thrust into the skin of a corpse, the puncture remains open, just as it will in a piece of leather. If life still remains, the little orifice is closed by contraction of the skin.—*Lyon Médical.*

Fruit for Constipation.—

According to a recent writer's experience, the treatment of constipation by gooseberries, currants, or plums, taken daily in large quantities, is followed by better results than the administration of any medicine yet known.

A Consultation.—

The mother-in law of the Mikado of Japan was recently ill. She had 423 physicians in attendance, and yet she recovered. A Buddhist priest located the cause of her illness in the introduction of railways.

American Public Health Association.—

The twenty-second annual meeting of this organization will be held in Montreal, Tuesday, Wednesday, Thursday, and Friday, September 25th–28th. The Secretary is Irving A. Watson, of Concord, N. H.

Prolonged Urinary Suppression.—

A case has been recently reported where there was suppression of urine for twelve days, with recovery. The treatment consisted of rest in bed, diaphoretics, mild cathartics, and milk diet.

A Fat Fee.—

The New York *Sun* is responsible for the statement that Dr. E. L. Keyes received $60,000 for his four months' trip on the yacht *Valiant,* while attending its owner Mr. Vanderbilt.

Infantile Constipation.—

Often the only treatment indicated is massage of the abdomen over the descending colon, once or twice each day, practiced from five to ten minutes each time.—*Exchange.*

The Railway Surgeon.—

This bi-weekly journal, the organ of the National Association of Railway Surgeons, sent out its first issue in June. It is published in Chicago.

Four Children at One Birth.—

Two boys and two girls, all healthy and well developed, is the record of a proud and happy mother in Tennessee.—*Medical Record.*

Book Reviews.

DISEASES OF THE RECTUM AND ANUS. By Charles B. Kelsey, A.M., M.D. Fourth Edition, revised and enlarged. Cloth; 8vo; pp. 496. Price, $4.00. William Wood & Co., New York.

An idea of the practical character of this book cannot better be given than by copying the diagnosis of stricture of the bowel:

In case disease actually exists high up in the bowel, the attempt to pass an instrument is full of danger. A patient may easily recover from a false passage made in the urethra, but such will seldom be the case with the rectum, for here when the instrument leaves the bowel it enters the peritoneum. To understand this danger it is only necessary to remember that the bowel is generally ulcerated both above and below the seat of the constriction, and is sometimes weakened to such an extent that it will allow a bougie to pass through it without the use of any appreciable force on the part of the surgeon. The bowel may also be lacerated without being directly perforated by the bougie, for the stricture may be pushed upward or dragged downward on the point of the instrument till the bowel gives way.

Supposing, now, that a rectal bougie cannot be passed eight or ten inches up the bowel, is it safe on this account alone to make a diagnosis of stricture high up? I should hesitate long before doing so, and should make many careful attempts to pass the instrument at different times, resorting to ether if necessary, carefully exploring through the abdominal wall for induration and watching for the usual signs of obstruction. There are one or two points worthy of remembrance in this connection. The first is that the obstruction due to a stricture will always be at the same point in the canal; and another point is that when a bougie has once become engaged in a stricture it is firmly grasped, and the resistance to its withdrawal is equal to that encountered in introducing it farther. The feeling conveyed to the hand under these circumstances is diagnostic, and is like that which is felt when the effort is made to withdraw a sound from the grasp of a stricture in the urethra.

Everywhere throughout the volume we find most satisfactory evidence of the author's experience and sincerity. Indeed, it is the only text-book of its class which is entirely practical and brings the subject matter within reach of the general practitioner as well as the specialist.

INTERNATIONAL SYSTEM OF ELECTRO-THERAPEUTICS. By H. R. Bigelow, M.D. Cloth; 8vo; pp. 1160. Price, $6.00; sheep, $7.00; half morocco, $7 50. The F. A Davis Co., Philadelphia.

Much undeserved censure has been bestowed upon electro-therapeutics, most of which, however, is traceable to those who have approached its study with exaggerated expectations or attempted its practice without thorough knowledge of the subject.

The editor of this volume and his thirty-eight associates are all recognized authorities

in the several branches of which they write. There are thirty-six elaborate chapters, each of which is an able monograph; consequently, in size, scope, and quality, the book surpasses all previous volumes upon this subject. The essay upon "Galvanism" is most fascinating, and every practitioner, whether employing electricity or not, certainly should be familiar with the subject matter found under the caption of "Electro-Physics." The following chapter titles will give some idea of the scope attempted: "The Necessity for Special Education in Electro Therapeutics;" "Animal Electricity;" "Static Electricity and Magnetism;" "Faradic or Induced Currents;" "Electro-Magnetism;" "Electro-Massage and Institutional Galvanism;" "Electro Physiology;" "Electro Diagnosis;" "Diffusion, Electric Osmosis, or Voltaic Narcotism." Nearly four hundred pages are occupied by these topics, the remainder of the volume being devoted to the special consideration of the treatment of diseases in all departments of medicine and surgery.

We believe this work is a needed addition to every physician's library, and that not one who desires to become fully posted in the newer methods and means of employing this therapeutic agent can afford to neglect this important contribution to medical literature.

THE OVERLAND MONTHLY. Price, 25 cents; $3.00 a year. Overland Publishing Company, San Francisco.

The July *Overland* is its mid-summer number, the contents of which are: "As Talked in the Sanctum," by the editor; "A Summer Idyl," by Helen M. Carpenter; "A Book," by L. Worthington Green; "Madrid Saunterings," by Stewart Culin; "Dot-And-Go One"—a story of San Francisco – by John Bonner; "The Minstrel and the Khan," by Charles F. Howell; "An Old Garden," by Herbert Bashford; "Little Manuel," a ghost story, by C. M. Tilden-Brown; "In California Hills," by Virna Woods; "A Voyage Northward," by F. De Laguna; "The Permanent in Poetry," by Warren Truitt; "Hawaii," by Amanda T. Jones; "A Study in Ochre," by Edwin V. Atkinson; "The Panglima Muda," chapters L-LV, by Rounsevelle Wildman; "A Problem in Authorship," by Robert Whitaker; "A River of Gold," by Albert Bigelow Paine; "Pablo's Fiesta," by Helen Elliott Bandini; "An Indian Runner," by Bergen Weeks Applegate; "To My Dog," by Carrie Blake Morgan; "Outward and Visible Signs"—"Outside the Zenana," by Frank Norris; "Building a State in Apache Land," part I, by Charles D. Poston; "Five Dances and a Supper," by Kathryn Cady; "In the Lava Beds," by John H. Hamilton; "David Deed," by Genevieve Green. There are the usual Book Reviews, etc.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 a year. The J. B. Lippincott Co., Philadelphia.

The complete novel in the August number is "Sweetheart Manette," by Maurice Thompson; "A Mess of Pottage," by Louise Stockton, is concluded. Other short stories are: "At the Rough-and-Tumble Landing," by Charles D. Roberts; "A Military Manœuvre," by Kate Ashley; "The Everlastin' Buzzards' Sit," by Charles McIlvaine; "In Memoriam of the Keys," by Johanna Staats. Thomas Stinson Jarvis contributes an essay on "Feminine Phases;" Charles Henry Webb discusses "Uncared-for Cats;" Mrs. M. E. W. Sherwood supplies interesting reminiscences of "Washington Before the War;" Mary Elizabeth Blake writes on "Muscles and Morals," George Grantham Bain on "Newspaper 'Faking,'" and Will Clemens on "Chinese Shops" and their peculiar signs. The poetry of the number is by Margaret Gilman George, Dora Reade Goodale, Fannie Bent Dillingham, and Professor John B. Tabb.

THE CANADIAN MAGAZINE. Price, 25 cents; $2.50 per year. Ontario Publishing Co., Toronto.

The July number contains "The Supernatural in Macbeth," by Walter Townsend; "The Criminal and Artificial Production of Deformities and Monstrosities," by G. Archie Stockwell, M.D.; "A Story of the Metropolis," by H. Cameron Nelles Wilson; "Three Years Among the Eskimos," by J. W. Tyrrell; "Papineau and His Home," by Thomas P. Gorman; "Pandora," by E. Yates Farmer; "A Serenade," by Keppell Strange; "The Beautiful Bahamas," by Honorable Donald Macinnes; "Death's Soliloquy," by W. J. K.; "Out-Door Sports in Australia," by J. Lambert Payne; "The Changed Grave," by J. S. McAidie; "In North-Western Wilds," by William Ogilvie, D.L.S., F.R.G.S. There are the usual "Gable Ends," "Book Notices," etc.

GODEY'S MAGAZINE. Price, 25 cents; $3.00 a year. The Godey Co., New York.

The contents of the July number are: "Seward at Santa Cruz," by Frederick W. Seward; "Chance"—a tale of Munich life—by Leon Mead; "Pope Leo XIII. and the Consistory," by Charles H. Adams; "The Author's Club," by Gilson Willets; "A Heliotrope Fantasy," by Serena Townsend; "The Metamorphosis of Professor Brown," by James Buckham; "Citizens of the Air," by Eleanor E. Greatorex; "The Wood Thrush's Nest,"

by Olive Thorne Miller; "An Actress's Vacation," by Elizabeth Bisland; "Robert," by Kate Upson Clark. The poetry of the number is: "Among the Flowers," by M. Imlay Taylor; "Silence," by Henry Tyrrell; "Rose Bloom," by Felix Carmen. There are the usual Book Reviews, Editorial, etc.

THE DELINEATOR. Price, 15 cents; $1.00 a year. Butterick Publishing Co., New York.

The August number is in every respect a worthy representative of this popular magazine. Edith Child contributes "A Girl's Life and Work at the University of Bryn Mawr," and F. E. Parrish a practical article on "Typewriting and Stenography as an Employment for Women." There are contributions on "Venetian Iron-Work;" "Crepe and Tissue Papers;" "Cultivation of the Voice," by Eleanor Georgen; "Mother and Daughter," "How to Live Wisely," "A Midsummer Night's Dream" and "A Mutual Improvement Club" offer suggestions for summer entertaining. Suggestions to the housekeeper are on "A Few Useful Pockets" and "Hints on Serving Fruits."

DEMOREST'S MAGAZINE. Price, 20 cents; $2.00 a year. W. Jennings Demorest, New York.

One woman's unique experience of life in the forests of Northern Michigan is most charmingly told in an exceedingly interesting paper entitled "In and About a Lumber Camp," in the August number. Under the title "Golden Silence" a pathetic story of a deaf mute is told. Chauncey Depew, Marshall Wilder, Beatrice Harraden, and others, tell some of the funniest stories they have heard. Other articles are: "How to Read and Write in Cipher;" "A Summer Girl;" "The Flower Garden in August;" "Visiting the Sick;" "Holiday Comforts." These, in addition to the stories and the bright matter in "Chat" and "Society Fads," make this an ideal number.

MCCLURE'S MAGAZINE. Price, 15 cents; $1.50 a year. S. S. McClure, Limited, New York.

The August number contains: "In the Depths of a Coal Mine," by Stephen Crane; "Some Personal Recollections of General Sherman," by S. H. M. Byers; "My First Book," by A. Conan Doyle; "The New Evolution," by Washington Gladden; "The Death Run," by Cy. Warman; "In Advance of the Circus," by Charles Theodore Murray; "The Mistress of the Foundry," by Earl Joslyn; "The Bravest Deed of the War," by T. J. Mackey; "The Doctors of Hoyland," by A. Conan Doyle; and "The Lover's Complaint"—an old Irish song.

Therapeutic Brevities.

Jamaica Dogwood in Vomiting.—For some years I have been using Jamaica Dogwood (*Piscidia Erythrina*) in the vomiting of pregnancy, with the greatest satisfaction. In more extreme cases, in which the vomiting or retching is almost constant independent of the taking of food, the remedy is best given as an enema in three or four ounces of boiled starch. With a view to increasing the action of the Piscidia, I combine with it the bromide of sodium—giving half a drachm of the fluid extract (P., D. & Co.) to twenty grains of bromide, every three or four hours. Where the stomach will retain the remedies, a somewhat smaller dose will answer by mouth, but usually administration by rectum is more satisfactory. After the second or third day an injection in the morning, and another in the evening, not only secures relief but brings about a return of the appetite, so that the patient is enabled to take and retain the more digestible solid foods.

Some little time ago, while preparing to operate for vesico-vaginal fistula, I recalled my experience with Dogwood in the vomiting of pregnancy, and determined to give it a trial. After the operation—commenced under chloroform, and continued under ether—vomiting started, when the nurse administered the Dogwood mixture, and after the first hour there was no nausea.

I have since used Jamaica Dogwood in a number of cases, without disappointment. Several times, the mixture being withheld too long, nausea has developed, but only to give way upon the administration of another enema. The effect has been so promptly satisfactory that I am led to hope that a serious drawback to the administration of anæsthetics (ether and chloroform) may be eliminated.—*Canadian Practitioner.*

Hypodermatic Injections of Nuclein.—Doctor Victor C. Vaughan, who in common with other investigators has been testing the efficacy of Nuclein in pneumonia, tuberculosis, etc., records his results in the *Journal of the American Medical Association*, as follows:

The subcutaneous injection of Nuclein increases the number of white blood-corpuscles:

This increase occurs in both healthy and tuberculous persons:

With like quantities of Nuclein injected, the increase varies with the person; it may be slight, and it may be three-fold:

This increase occurs principally in the polynuclear cells, and is evident as a rule as soon as the third hour after treatment, and

generally disappears after the forty-eighth hour. If Nuclein proves of any value in the treatment of tuberculosis, it will most probably be due to the fact that it increases the polynuclear white corpuscles.

I have been using Nuclein in a case of tuberculosis since May 1st, 1893. At first I employed only yeast Nuclein, but now am using spleen Nuclein in some cases. Only in initial cases may any benefit be expected, and even in regard to these I must have more abundant material and a longer experience before I can speak with any degree of certainty.

Cocaine as a Local Anæsthetic.—Doctor Moraga, before the International Dermatological Congress, declared:

Cocaine dissolved in distilled water loses a great part of its efficacy after a time, hence laurel-water is to be preferred as a solvent. One should never begin with more than one-third to three-fifths of a grain, and never exceed one and one-half grains.

The intensity and extent of anæsthesia vary according to the dose, complete in many, incomplete in other cases; its action depends also upon the susceptibility of the patient, small doses sometimes acting intensely, sometimes the reverse. Generally a certain tolerance is established after a time, but always gradually and without the production of cocainism; those of lymphatic or nervous temperament, women, children, and those weakened from any cause, are most susceptible. Constitutional effects, as chilling of the extremities, difficulty of breathing, palpitation, etc., are only produced by doses exceeding one and one-half grains. Cocaine has no danger so long as the prescribed dose given above is not exceeded.—*Monatshefte für Praktische Dermatologie.*

Treatment of Consumption.—Next to rest and food, Strychnine in large doses is the most important agent in the treatment of pulmonary consumption. Begin with $\frac{1}{33}$ grain, and gradually increase to $\frac{1}{16}$, $\frac{1}{10}$, or $\frac{1}{8}$ grain, or even larger doses, given four times a day.—It does not produce albuminuria or diabetes, as is generally supposed, but does alleviate loss of appetite, vomiting, constipation, nervousness and sleeplessness, pain in the chest, cough and expectoration, dyspnœa, weakness of the heart, and acts as a blood-builder in an eminent degree. Its usefulness rests, of course, on its influence over the nervous system, and is another link in the chain of evidence which shows that in the great majority of cases pulmonary consumption is the direct result of primary disease of the pulmonary nerve supply.—Doctor Thos. J. Mays, in *College and Clinical Record.*

Early Surgical Interference in Malignant Growths.—In the *Journal of the American Medical Association*, Doctor R. A. McLean asserts that all cases of suspected malignant growths should be treated surgically in the early stages of their development. Excision should be done in all cases of malignant growths, however extensive, in which the general health has not been seriously impaired, or extensive lymphatic involvement or metastasis has not occurred.

Operation should be refused: In cases of recurrent or primary malignancy in which the general health is so much impaired as to render an extensive operation a serious risk to life; in all cases of extensive ulceration and infiltration of lymph vessels and glands; and in all cases of sarcoma in which there is a probability of metastasis having already occurred.

Hæmorrhoids.—If you wish to radically cure your patients with the least possible pain, loss of time, confinement to the house and risk of accident—use the clamp and cautery. If you wish to accomplish the same result, with no more risk but with more pain, more local and general disturbance, and longer confinement—use the ligature. If you wish to take an hour to do what can as well be done in a minute, and gain nothing by it in results—use Whitehead's operation. If you wish a palliative treatment which is not a radical cure, except when sloughing is produced, which is often attended by accidents which will cause great annoyance to yourself and frequent disaster to patients, and which is not free from grave risks—use carbolic-acid injection.—Doctor Charles B. Kelsey.

Blue Flag.—The catalytic properties of *Iris versicolor* are most marked. The drug is not only a true hepatic remedy, overcoming torpor and increasing functional activity, but a direct stimulant to waste and excretion, acting immediately upon the glandular system. Its alterative properties are plainly apparent in the influence exerted upon scrofula, secondary syphilis, and all blood disorders. In goitre it will quickly reduce the enlarged thyroid, and improve general nutrition. It will do all this and even more if a good preparation is used. A use to which physicians have seldom put it is the treat-

ment of sick-headache, for which it can be relied upon with positiveness in many cases, whether of a bilious or nervous origin.—*Chicago Medical Times.*

Opium for Epilepsy.—Recently Doctor Joseph Collins presented to the New York Academy of Medicine his experience with this agent in fifty cases. He gave from half a grain to two grains daily, and gradually increased to fifteen grains. After a few weeks the Opium was discontinued suddenly and large doses of bromide (half a drachm four times daily) substituted for a short time, and then reduced. In twenty cases, all except one were benefited, and in two there had been no return. He did not regard Opium as a specific, or as uniting with the bromides, but thought it a valuable adjuvant, one that would take a permanent place in the management of this obstinate disease.

Abortive Treatment of Coryza.—Doctor J. Gerard reports good results obtained by the use of inhalations of Chloroform in arresting the extension of coryza to bronchial tubes. He at first employed a mixture of carbolic acid and ammonia, but finally replaced by Chloroform, which acted much better. The inhalation is to be practiced several times up to the point of the first signs of anæsthesia. When this has been done at the time the first nasal symptoms appeared, no further extension of the affection has occurred. In epidemics of coryza and influenza, even in cases where the catarrhal condition was severe, Gerard has seen the disease aborted.—*American Doctor.*

Creosote in Tuberculosis.—Doctor Blanchard. of Geneva, recently reported results in seventeen cases of latent tuberculosis treated with Creosote, and formulates the following conclusions:

Pulmonary tuberculosis is curable:

Creosote is a valuable remedy, especially in incipient cases:

It is important that the diagnosis should be made early to give this treatment a fair chance.

The remedy is also valuable in cases of bronchial catarrh following influenza, which are regarded by Blanchard as cases of incipient phthisis.

Puerperal Convulsions.—Doctor Davis writes the *Virginia Medical Monthly* that Veratrum Viride will control puerperal convulsions when administered in large doses, and that it is perfectly safe to administer it in sufficient quantities to control any case of convulsions. The dose employed by him is twenty-five drops and upwards of the tincture, administered by the mouth, and as much as twenty-five drops for the first dose given hypodermatically. During thirty-five years Doctor Davis has had twenty-five cases of puerperal convulsions, all of which were treated in this way, and without a single death or untoward result.

Damiana.—This valuable drug is a true nutrient gland tonic, and moreover a restorative tonic of superior power; of this there can be no question in the minds of those who have made use of it in wasting diseases—consumption, low forms of scrofula, chlorosis, neurasthenia, etc. It is especially in declining functional activity manifested in protracted and lowered vitality of the general system, that it becomes valuable, affording healthy nutrition, and stimulating vitality. *Medical Free Press.*

Jaborandi.—Is a powerful stimulant to the excretion of water and the secreting activity of mucous membrane. In large doses it is a depressant, in small a sedative, and it also stimulates the capillary circulation. It is perhaps the most active sialagogue and diaphoretic at our command. It is specific in dry, hoarse, bronchial cough, in stridulous laryngitis, and in some forms of croup.—*Medical Summary.*

The Danger Line in Anæsthesia.—Doctor Kynett calls attention to this valuable sign as the danger line in anæsthesia: When the addition of fresh ether to the cone fails to produce an up-and-down movement of the wind-pipe, the ether should be withdrawn; when that movement occurs, the condition is a safe one.—*Medical and Surgical Reporter.*

Black Cohosh in Uterine Complaints.—In uterine disorders with hysterical symptoms and mental depression at the menstrual period, a small dose of *Cimicifuga racemosa* every two hours, for a few days preceding the epoch, will produce admirable results.—*Medical Times.*

Vomiting of Pregnancy.—The rectal injection of thirty grains of Chloral Hydrate often exercises the most happy effect in the vomiting of pregnancy.

Medical Progress.

HYDROPHOBIA.—The number of cases of hydrophobia that occur in this country is happily small. It would doubtless be smaller still but for the exploitation of the Pasteur Institute conducted by Gibier in New York, and of its feeble imitator conducted by Lagorio in Chicago. These institutions, and the newspapers that in times past have published sensational accounts of cases of so-called hydrophobia, have in a mild way reproduced some of the conditions which make France the hotbed of hydrophobia, as well as of hystero-epilepsy. But the psychological make-up of Americans is less favorable to the development of the germs of hydrophobia or those of hystero epilepsy than that of the French, and consequently there is less of both here than there is in France. The number of deaths in France is greater than it was before Pasteur, just ten years ago (in May, 1884), boasted to a newspaper reporter: "Whoever gets bitten by a mad dog has only to submit to my three little inoculations, and he need not have the slightest fear of hydrophobia." The year before he made that boast there were four deaths from hydrophobia in Paris (the Department of the Seine); the year after, when he had practiced his preventive method for six months, the deaths from hydrophobia leaped at once from four to twenty-two. In 1886 the number fell to three again, but I have a list of twenty-three persons that died after treatment by Pasteur himself in that year. In 1887 the deaths in Paris fell to nine, and rose in 1888 to nineteen. These oscillations indicate that Pasteur's method is no more preventive of hydrophobia than is the method which he declared in 1884 would eradicate rabies in dogs. On the contrary, Pasteur's method has undoubtedly increased the number of deaths from hydrophobia. I have indicated what has taken place in France, and can positively assert that there has been no diminution in the number of deaths from hydrophobia in any part of the world since Pasteur's infallible cures were inaugurated; and at the same time there has been added to these a large number of deaths due to inoculation of the virus of what ought to be called "Pasteur's disease." Just how many these have been no man can say. The statistics are confusing. Those from friendly sources contain remarkable discrepancies. Pasteur's own statistics, published in the *Annales de l'Institut Pasteur* for March of this year, admit seventy-two deaths in seven and one-half years, after treatment, in Paris. My own show a much larger number, while I find that Dujardin-Beaumetz, a most enthusiastic supporter of Pasteur, reported to the Academie de Médecine on June 21st, 1892, ninety-eight cases in only six years, which is just twenty-six cases more than Pasteur himself reported for eight years. One way in which such curious figures appear may be seen when we examine Pasteur's detailed report for 1893, in which we find that ten actual deaths are set down as four, because two of the ten unfortunates succumbed in less, than fifteen days, three developed their fatal disease while receiving the inoculations, and one did not stay to have the treatment completed. The same manipulation may be found in the reports for other years.

In view of these facts, it is astonishing to see how medical writers quote approvingly the claim that the Pasteur method has reduced the mortality from hydrophobia from fifteen or sixteen per cent. of those bitten by rabid animals to a fraction of one per cent., especially as this claim of Pasteur and his disciples, besides being in the face of the fact that more people die now from this disease and Pasteur's disease than used to die from hydrophobia, rests upon the stupendous fallacy that Pasteur has saved from death by hydrophobia during the last eight years nearly 15,000 persons, who are in the report spoken of as "cured," of whom about nine-tenths were Frenchmen, say about 1,500 a year. Of this number he is supposed to have "cured" about 1,400 Frenchmen in the year 1893—more persons than have died from hydrophobia in the United States in a century.—DOCTOR CHARLES DULLES, in *Medical News*.

DIAGNOSIS OF PREGNANCY.—Lawson Tait, in a clinical lecture, points out the great difficulties experienced in obtaining truthful and correct histories from illegitimately pregnant women, and the great caution to be exercised by the obstetrician examining such patients. Several interesting cases are reported from his great experience, in which he himself and others have had but narrow escapes from grave errors in diagnosis through the untruthful histories given. He recommends that the greatest care be exercised, particularly in regard to the matter of asking questions as to the absence of menstruation. A question should be put in as casual a manner as possible as to when the last period took place; if within a month, exercise the utmost caution to prove that the case cannot be one of pregnancy. The great probability is that it is not one; but the patient may be untruthful, and even regularly recurring menstrua-

tion is not incompatible with pregnancy. If the answer given is to the effect that the last period was some months previous to the date of examination, and if the abdominal tumor is of a size which would be that of a pregnant uterus of corresponding date, the chances are infinitely in favor of pregnancy. It should also be ascertained whether menstruation was regular previous to its cessation, and if the ceasing was an abrupt one. If the latter, and the previous menstruations have been regular, the certainty of the diagnosis of pregnancy is complete. If the previous menstruations have been irregular and the cessation not sudden, the history altogether fails and may be entirely neglected. It should be borne in mind that the adolescent anæmia of young girls suspends their menstrual flow almost invariably, but it does not necessarily interfere with their productive capacity.

The diagnosis of pregnancy is a perplexing question not only in the illegitimately pregnant woman. Even in cases where the patient gives an honest history as far as it is in her power, it is sometimes impossible to tell before the movement of the child is felt. The most careful physicians slip up once in a while on this point, sometimes in what appear to be positive cases.

Unless all the signs of pregnancy are present, the less a physician says previous to four and a half months the better for his reputation in this line.—*Provincial Medical Journal.*

STATUS OF THORACIC SURGERY.—In the *Journal of the American Medical Association*, Doctor Gaston discusses this subject and draws the following inferences:

All penetrating wounds of the thorax may be closed hermetically by suture or otherwise, after allowing the discharges of fluid blood from the opening:

Foreign bodies lodged in the bronchi may be reached through the chest; the trachea will afford the lowest available point:

Experiments on reaching the bronchi through the chest will afford little encouragement in undertaking operations upon the human subject:

Medication as a preventive and a curative agency in pleuritic effusion is worthy of trial before having recourse to aspiration:

Aspiration is indicated when there are large serous accumulations in the chest, and likewise in pneumo-thorax, but cannot be relied upon for the relief of purulent collections:

Partial resections of ribs are attended with better results in some cases of empyema than the complete removal of the segments of several ribs:

The excision of a small portion of one rib, with the introduction of drainage tube, has been generally attended with good results:

Washing out the cavity of the chest is not requisite, except in contamination and decomposition of the contents:

The operation of thoracotomy for abscess and gangrene of the lung should be accompanied with antiseptic applications and with tamponage of gauze:

Tumors of the mediastinum may admit of interference, but further developments of technique are necessary before the method can be generally advised.

BLOODLESS AMPUTATION AT THE HIP-JOINT AN OLD METHOD.—Doctor Buechner, discussing the various operations for amputating at the hip-joint, claims that the so-called methods of Senn and Wyeth are only modifications of methods already known. The original method is that of Volkmann, and is performed as follows: The leg being emptied of blood, an Esmarch tube is applied close to Poupart's ligament and prevented from slipping by two or three pieces of bandage held by an assistant. A circular amputation of the thigh is made, all vessels secured, and the tourniquet removed. The remaining bone is then disarticulated through a long external incision and blunt dissection. He describes an operation which he so performed, which was "as bloodless as any amputation could be." The use of Wyeth's pins he describes as unnecessary in the majority of cases, and quotes Koenig as having spoken unfavorably of enucleation of the bone without the external incision. The operation of Furneaux Jordan differs only from that of Volkmann in first enucleating the bone and then cutting through the limb. The operation of Senn is also said to be practically that of Trendelenburg, only the latter thrusts pins through the wound and compresses the anterior and posterior flaps by means of a rubber tube wound on either side around their projecting ends, instead of passing the tube through the wound and thence around the flaps. The mortality of amputations at the hip-joint is given at 55 to 60 per cent., instead of 70 to 90 per cent. as heretofore.—*University Medical Magazine.*

SURGICAL ECZEMA.—Lassar, of Berlin, in *La Semaine Médicale*, calls attention to the frequency of eczema among surgeons inactive practice who use some of the various

antiseptic solutions for cleansing the hands and instruments. It is well known that those who have had eczema are not exempt because of using these solutions, but that they are rather predisposed to future attacks. The skin is left in a changed condition which is hardly noticeable after eczema, but is very susceptible to any irritation. Frequently it is only necessary to change the antiseptic solution to relieve the eczema.

As a preventive he finds the following very efficient: After washing the hands with water and good soap, rub them while damp with a mixture of olive oil, glycerin, vaselin, and lanolin, in equal parts. General internal treatment should also be given.

TUBERCULOSIS IN DOMESTIC PETS.—Professor Frohner, of the Berlin Veterinary School, recently investigated the prevalence of tuberculosis among small domestic animals, and his results are as important as they are interesting. In the clinic for small animals during the last seven years, out of a total number of 70,000, only 281 (or 0.4 per-cent.) were found suffering from tuberculosis. The proportion of tuberculous dogs was as low as 0.04 per cent.; cats seem to be considerably more subject to the disease, the proportion of tuberculosis among them being one per cent. The animals most severely affected are parrots, the ratio of tuberculosis among them being as high as twenty-five per cent., no doubt owing to imperfect acclimatization. Living as these birds mostly do in rooms constantly used by members of the family, their liability to tuberculosis makes them somewhat dangerous pets.—*British Medical Journal.*

HYDROCELE IN THE FEMALE.—The term correctly signifies a collection of fluid in an imperfectly obliterated canal of Nuck, and is usually detected in pregnancy and childbed. According to Wechselmann, it has been found twenty two times on the right side, seventeen on the left, and in two cases on both sides. Lammert observed in a nullipara, aged 39, a hydrocele that formed an enormous pyriform, elastic, transparent and fluctuating swelling, as big as a man's fist, in the left groin. It was irreducible, and there was no impulse on coughing; it reached as far as the labium. On incision a pint of serum escaped; the parts were explored, and the hydrocele was found ending as a blind pouch at the internal abdominal ring.—*Centralblatt für Gynäkologie.*

FRACTURE OF THE AUDITORY CANAL.—In a recent number of the *Medical and Surgical Reporter* (Philadelphia), Doctor Barclay calls attention to the occurrence of fracture of the auditory canal as the result of a blow upon the lower jaw, and to its liability to be entirely overlooked or to be taken for fracture at the base of the cranium or ruptured tympanum. It is apt to be followed by hæmorrhage from the external auditory meatus, that may be free and likewise persist for some days.

Doctor Barclay recommends cleansing of the ear, cleansing of the canal, and insertion of a pledget of cotton and wool with appropriate medicament.

A SIGN OF BREECH PRESENTATION.—When, in a woman who has passed the sixth month of pregnancy, a sharp pain is produced by placing the hand on the fundus uteri, it may be almost affirmed that there is a breech presentation. The fact is very frequent, although not constant, being present in about 70 per cent. of cases. The pain is sometimes spontaneous. How is it to be explained? According to Pinard, it is due to the irregular distention produced by the rounded mass of the head. If version is performed, the pain disappears.—*La Clinique Internal.*

THE PARASITE OF FAVUS.—MM. Constantin and Sabrayes, after studying the course of favus in man, the dog, and the fowl, conclude that the three forms arise from three distinct parasites. The fungus found in the human is nearly related to that of the dog, but distinguished from the latter by its appearance in culture, by the invariable structure of its myce'ium, and by its color. The fungus found in the fowl is altogether different from that found in the human subject or dog.—*Recueil de Médecine Vétérinaire.*

TYPHOID AND VACCINATION.—Doctor William Finder observed that after typhoid-fever patients recover they are very susceptible to vaccination. This observation has been verified many times during a number of years, and the writer suggests that others confirm or disprove the theory. So satisfied is Doctor Finder with the correctness of the observation, that he now revaccinates his typhoid patients as soon as they recover from the fever.—*Medical News.*

The Medical Age.

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Original Articles.

PERNICIOUS FEVER.*

BY DR. JOAO VINCENTE TORRES HOMEM.†

(*Continued from page 428.*)

Case 5.—Ricardo, mulatto slave, joiner, was brought to Mizericordia Hospital on the 7th of July, 1869, and placed in an isolated room, because the physician who had seen him in his master's house diagnosed cholera. Being on duty in the clinical lecture-room, I was invited by the director of the sanitary service to see the patient. I went to the room, attended by the students, and here the following history was elicited: Ricardo was subject to attacks of erysipelas, and had elephantiasis of the leg; had suffered from intermittent fever during February and March of the same year, contracted in the town of Estrella. Some days before the appearance of the serious symptoms observed he was attacked by rheumatoid pains in the legs, and at the resting time allowed the workmen (from noon to two o'clock) he went to lie down. On June 6th, at midday, he took a Le Roy's cathartic, and at 5 in the afternoon ate two oranges. At 10 P.M. had a violent chill, followed by vomiting and profuse diarrhœa. At 6 the following morning (7th) cramps and hiccough appeared.

Condition on arrival: Face altered in expression; eyes deeply sunk in the sockets; voice low, stifled and wearied; absence of elasticity in the skin, dents remaining on pressure; complete algidity; very painful cramps in the legs; pulse 120, very small and hard; tongue cold and furred; devouring thirst; frequent vomiting, excited whenever patient drinks water; profuse diarrhœa. The patient arrived at 9 in the morning, and at 10 had already had two evacuations; the matter evacuated consisted of a serous fluid tinged with bile; no rice-water evacuations or vomiting; liver and spleen enlarged, the right as well as left hypochondrium sensitive to pressure; belly retracted and tense; urine very scanty, without albumen; intellect unimpaired, as is also the respiratory system.

After hearing the history and examining the patient, I diagnosed a choleraic pernicious fever. I named twelve students to examine the patient, one each hour, and took charge of his treatment at the request of the director of the hospital.

℞ Bisulphate of quinine, 2 grammes.
Ext. opium, 0.15 gramme.
Essence peppermint, 6 drops.
Syrup of ether, 30 grammes.
Canella-water, 90 grammes.

A tablespoonful every hour.

℞ Bisulphate of quinine, 2 grammes.
Sydenham's laudanum, 2 grammes.
Infusion of flaxseed, 250 grammes.
Whites of two eggs.

For four enemata. One every two hours.

Sinapisms to upper and lower extremities and epigastrium. Frequent friction over the whole body with a mixture of tincture of valerian, tincture of mustard, and ethereal tincture of phosphorus.

At 5 P.M. I found the patient better. The evacuations had lessened a good deal, and vomiting and cramps had ceased; the algidity continued, but was less marked in trunk and face; on the side of the face and skin the symptoms persisted in the same degree. The last enema had been given shortly before, and the mixture was not yet finished; the friction had been made four times by the students. In place of the mixture after it was exhausted, I ordered 120 grammes of good Port.

July 8th. Reappearance of vomiting and increase of diarrhœa; the algidity, even in the extremities, is less; frequent hiccoughs supervened in the morning, and still persisted at the visiting hour (8.30 A.M.). The other symptoms remained the same; pulse 108. Ordered same medication as the evening before; also a small blister to epigastrium.

July 9th. I am informed by the internes, and by the students designated to visit the

*A clinical study of the fevers of Rio de Janeiro—translated by Surgeon George P. Bradley, United States Navy, and read before the Association of Military Surgeons of the United States, session of 1894.

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patient every hour, that he improved sensibly from 3 P.M. on. During the night he continued the use of the mixture, but at longer intervals between the doses. At the visiting hour the improvement was more satisfactory; all the symptoms were less intense; the vomiting, diarrhœa, and hiccough had entirely disappeared. Only in the upper extremities, which were kept uncovered, was any lowering of temperature noted; pulse 96; voice clearer and more resonant; the skin had recovered in part its normal elasticity; tongue still furred; slight thirst; liver and spleen increased in size; abdomen more flaccid; urine more abundant and high-colored, no albumen. Ordered same mixture, with one gramme only of sulphate of quinine, and five centigrammes extract of opium; same enemata with three decigrammes of sulphate of quinine each, and four drops laudanum; two frictions per day with same mixture; two mutton broths with Port wine, very hot coffee.

July 10th. Improvement progressing. The second broth excited vomiting, which ceased spontaneously. Face more flushed; eyes still sunken; voice stronger and intelligible; temperature normal; pulse 92 and fuller; tongue hardly furred at base; slight thirst; abdomen flaccid. Two evacuations in twenty-four hours. Liver a little enlarged; spleen normal; urine *extraordinarily abundant*, color normal. Deafness of cinchonism. Ordered six decigrammes of sulphate of quinine in coffee; rich Port wine, 120 grammes in teaspoonful doses; two frictions per day; meat broth, coffee.

From the 11th on, the hourly visits by the medical students ceased, as the patient progressively improved. He took sulphate of quinine to the 13th (three decigrammes the last two days). Left hospital on the 24th.

Case 6.—Senhora D. M——, aged thirty-five, married, mother of four children, nursing the last, ten months of age, residing in the Rua da Floresta, in Catumby, was attacked by a violent chill two hours after breakfast, in March, 1870. She vomited copiously, had very intense colic, and whenever the attacks of colic appeared her hands and feet grew cold. Her brother, who was then a student of medicine of the sixth year, believing it an indigestion, prescribed a mixture containing tincture of chamomile and nux vomica, and a purgative enema containing castor oil and electuary of senna.

At 9 P.M., thinking her condition very serious, he came to ask me to see her. I transcribe notes made on this first visit: Physiognomy indicating great prostration and dejection; the patient is convinced she will die, and bewails her lot in lamentable phrases, but with a wearied, husky voice. Violent cramps; complete algidity of entire body; pulse so frequent, small, and wiry that it was impossible for me to count the number of pulsations; tongue large, moist, and rose-red; devouring thirst; frequent vomiting, spontaneous or excited by swallowing any sort of fluid; abdomen painless everywhere; frequent and profuse diarrhœa; the patient had had in three hours seven evacuations, always preceded by colic, which ceased as soon as the desire to purge was satisfied; the first two stools excited by the purgative enema were fæcal, the others wholly serous. The extreme debility of the patient did not allow her to seek the closet stool, and the evacuations were passed in bed. There was no congestion of spleen or liver. The urine was not examined, as the patient had urinated when she had the first dejection.

Sinapisms to the extremities, hot-water bottles round the body, stimulant and aromatic frictions, diffusible stimulant mixtures with full doses of opium, ether capsules, wine, enemata of sulphate of quinine, tincture of valerian and musk—such were the means successively or simultaneously employed and administered by my own hands until two o'clock in the morning, without the slightest benefit. At 3.15 A.M. the patient expired. The paroxysm lasted ten hours.

Case 7.—Antonio Villares, Portuguese, aged forty-eight, resident of Maxambomba, where he was engaged in agriculture, entered the Santa Izabel ward on the 1st of June, 1872, with all the symptoms of malarial cachexia and paroxysms of quotidian intermittent fever. Despite the large doses of sulphate and valerianate of quinine which he took, the paroxysms appeared regularly on the 2d, 3d, 4th, 5th, and 6th, characterized by the three stages, and separated by a complete apyretic interval always the same in extent. These paroxysms appeared from 3 to 4 in the afternoon, and terminated at dawn the following day.

On the 7th of June, at the visiting hour, I found the patient in the following condition: Profound prostration; perceptible lowering of temperature in upper and lower limbs; axillary temperature 36.4° (97.5° F.); pulse 120. The patient was bathed in profuse perspiration—his garments, pillows, bed-clothing, and mattress were wet; over the face, trunk, and limbs the sweat ran abundantly; one would have said the patient had been immersed in water. The Sister of Charity reports that this profuse perspiration dated

from 4 in the morning, and that the linen had been changed twice. Tongue very furred; intense thirst; great congestion of liver and spleen, the latter viscus two fingers' breadth beyond the left costal border; belly tense; constipation; urine scanty, without albumen. Heart enlarged and weak; systolic bellows-murmur at base of præcordial region, two bellows sounds in carotids; cough infrequent and dry; dyspnœa; fine subcrepitant râles at base of left lung. I diagnosed a sudoral or diaphoretic pernicious attack, and ordered the following:

℞ Sulphate of quinine, } ää 2 grammes.
Valerianate of quinine, }
Gummy extract of opium, 0.45 gramme.
Soft extract of cinchona, q. s.

Make eighteen pills. One every hour together with two tablespoonfuls of Agua Ingleza.

Also ordered a stimulant cathartic enema, and sinapisms to extremities.

At 3 P.M. the patient appeared better; but at 5.30 the perspiration again became as profuse as in the morning, and true algidity declared itself. At 8 P.M. epileptiform convulsions set in, and death occurred at 11 P.M. preceded by a short period of coma.

Autopsy (ten hours after death): Very marked anæmia of cerebral centres; the white and gray matter of cerebrum and cerebellum less consistent than in normal state; these organs seemed to have been macerated in water for several days. Medulla oblongata very pale, but of physiological consistency. Lungs sound, barely œdematous infiltration at base of left. Heart enlarged, pale, flabby, easily breaking down, pitting on the slightest pressure; dilatation of left auricle and right ventricle, with thinning of their walls; some eccentric hypertrophy of left ventricle; valves and orifices normal. Liver very large, hardened, of dark red color, presenting in right lobe some zones of dirty yellow; the cut surfaces were dry, a little blackish blood flowing from them on pressure. Gall-bladder containing but little bile, very compact and dark. Spleen hypertrophied, eighteen centimeters in its greater diameter and six in its transverse (seven by two-and-one-half inches), very hard and resisting the edge of the scalpel. Kidneys pale and of normal size. The gastro-intestinal canal was not examined.

VII. *Ardent* pernicious fever is exclusively characterized by the excessive heat which the patient presents in the second stage of the paroxysm (105.5°, 106°, 106.8°, 107.6° F.), and by the prolonged duration of this stage (eighteen, twenty-four, thirty-six, and forty-eight hours). After such an elevated temperature the thermometer rapidly falls below 98.6°, a short agony appears, and death takes place. This form of pernicious fever is rare with us, and usually terminates fatally. In ten years' time I observed only two cases, and the patients died. Three elements are necessary to the exact diagnosis of the disease: to know that the patient is under the influence of the malarial poison, that he has none of the diseases exciting great increase of febrile heat (variola, scarlatina, pneumonia, meningitis), and that this heat exceeds certain limits; for this latter the thermometer becomes indispensable.

Case 8.—Camillo, free mulatto, driver of a diligence, thirty-two years old, very robust, living in Mataporcos, entered the Santa Izabel ward on July 28th, 1867. Had suffered from paroxysms of quotidian intermittent fever, attended by facial neuralgia, for a fortnight. When he entered the hospital (at 5 P.M.) he complained of great pain in the right temporal region, and had very high fever. The physician on duty prescribed a diaphoretic mixture containing tincture of aconite and acetate of ammonia, a purgative enema, and one gramme of sulphate of quinine, to be given as soon as the fever lessened.

Condition on July 29th: Face very flushed and swollen; eyes brilliant; temperature of skin very high; pulse 120, full and hard; pain in right facial region. Tongue covered with very thick white fur; great thirst; nausea; epigastrium sensitive to pressure; liver enlarged; spleen larger than normal; belly tense; two evacuations induced by enema; urine scanty and very red; nervous and respiratory systems in normal condition.

Ordered twenty leeches to anus; six wet cups to hepatic region; an emetic mixture containing ipecac and antimony; two grammes of sulphate of quinine in two doses, after operation of emetic.

At 3 P.M., after the leeching, cupping, and emesis, the patient perspired profusely and had less fever; at this time one gramme of sulphate of quinine was given him in a glass of sulphuric lemonade.* At six o'clock, in spite of his finding himself much hotter, he took the second dose of the remedy.

July 30th. Prostration of strength; skin very dry and hot; pulse 128, less full and hard; absence of pain in face; tongue very coated; greater enlargement of liver and spleen; same sensitiveness of epigastrium;

*Acid sulphuric (at 1.84), 2 grammes.
Water, 900 grammes.
Syrup, 100 grammes.

constipation; urine very scanty and high-colored; respiratory organs sound; no delirium; insomnia.

Ordered a mixture containing two grammes of bisulphate of quinine, and an equal dose of tincture of digitalis; a purgative enema; Stoll's antiphlogistic beverage *ad libitum*.

At 5 P.M. the patient was in the same condition. At 4 in the morning of the 31st he became comatose with cold extremities; died at 7 A.M.

Autopsy (nine hours after death): Some injection of vessels of brain and meninges. Lungs and heart normal. Great congestion of liver and spleen. Very intense reddening of mucous membrane of stomach and duodenum. Kidneys hyperæmic.

Case 9.—Joaquim Soares de Mello, Portuguese, twenty-nine years old, farm laborer, residing in Itaguahy, entered the Santa Izabel ward August 12th, 1875, with malarial cachexia. Under the use of pills composed of subcarbonate of iron, soft extract of cinchona, and sulphate of quinine, besides the *Agua de Inglaterra*, frictions of tincture of iodine to the hypochondria, and restorative diet, the patient was improving perceptibly.

On September 2d the interne found him at 8 in the morning with a temperature of 106.2° F. At the visiting hour the Sister of Charity informed me that he had had a violent chill at 9 the night before. The tongue was very furred. There was no change in any of the other organs; the liver and spleen, which had been still enlarged the evening previous, had not increased in size. An emetic, and one gramme of sulphate of quinine after its action, were the means used that day. At 5 in the afternoon, in spite of copious emesis, and the dose of quinine which was well borne, the temperature reached 107.3°. The interne prescribed a mixture of tincture of digitalis and veratrine, which did not produce the slightest benefit. At 2 in the morning of the 3d the patient expired.

Autopsy revealed nothing special beyond hypertrophy of the liver and spleen, eccentric hypertrophy of the left ventricle of the heart, and paleness of the white substance of the brain.

VIII. The *comatose* form, the most frequent after the algid, is characterized by the sudden appearance of coma or carus, without preceding delirium or other sign of cerebral excitement. From simple sopor to true apoplectic carus, we observe in this form of pernicious fever the diverse grades of collapse of the innervation of the brain. Sometimes the febrile reaction is slight or even *nil;* sometimes the patient appears with a very high temperature, accompanied usually with a pulse small, infrequent, and hard, or even intermittent. The existence of hemiplegia, coincident with the comatose condition, when the latter depends directly upon a pernicious paroxysm, has been justly disputed by the most eminent pyretologists.

In none of the cases observed by me has the patient been hemiplegic. Complete relaxation of the upper and lower limbs, relaxation of the sphincters of the anus and bladder, giving rise to involuntary evacuations of fæces and urine, more or less complete loss of general and special sensation, and abolition of reflex motion, are the symptoms attending the coma.

The comatose form is that most frequently met with in the cases where a pernicious paroxysm has not been preceded by simple intermittent attacks. Thence arises the reason why the inexperienced practitioner will often find himself embarrassed in making a precise diagnosis, especially if he does not attend to a certain number of circumstances foreign to the symptomatology.

Cerebral hæmorrhage, apoplectiform cerebral congestion, and cerebro-meningitis in the second stage, are the three diseases which may be confounded with a pernicious paroxysm of comatose form when no attack of simple intermittent fever, frank or masked, has preceded, or when no person interested in the patient's health is found at his side to furnish information of the previous history. The first two affections, essentially apyretic, can only be confounded with pernicious fever when during the paroxysm to be recognized the patient has a temperature normal or below normal. The third, essentially febrile, will only be taken into account if the thermometer reveals the existence of fever.

In cerebral hæmorrhage, the apoplectic coma either lasts for some hours and disappears, leaving in its place the symptoms of paralysis, or it has a long duration and is followed by death; in the former case, doubt in regard to diagnosis will be very transitory; in the second, the extension of the hæmorrhagic centre, or the capital importance of the part of the brain affected, gives such expressiveness to the array of symptoms that the diagnosis is very prominently marked.

The pallor of the face, the puffing-out of the commissure of the lips during expiration (*"fumer à la pipe"*), the coolness of the extremities, the excessive smallness and concentration of the pulse, the absolute inertia of the limbs, the rapidity with which these symptoms appear, or the nature of the prodromata preceding them, guide the physician safely in the path of truth. Moreover, cerebral hæmorrhage demands certain pathogenic conditions which are easily appreciable in the majority of cases.

Rupture of the vessels is induced — by changes in their walls (*arteritis deformans, atheroma, fatty degeneration, miliary aneurism*); by lessening the consistency of perivascular tissue (the hæmorrhagiparous softening of Rochoux); by increase of tension of the blood (hypertrophy of the heart with valvular lesion, chronic lesions of the respiratory organs); or by changes in the crasis of the blood (pyæmia, scorbutus, chlorosis, hæmophilia, chloræmia, malarial cachexia). As we shall see in the paragraph especially devoted to the diagnosis of pernicious fever in general, there are a certain number of signs which serve as a guide to the physician in perplexing cases, and which are fully applicable to the comatose form. In cerebro-meningitis, before the appearance of the coma, the patient evinces symptoms of cerebral excitement, which are very marked if the inflammation is seated in the upper or convex portion of the brain, and of little intensity or transitory if the basal regions are especially compromised. These symptoms of excitement (delirium, convulsions, spasms) precede the comatose stage, whether this stage be connected with the compression of the nervous substance by the meningeal exudate (effusion) or whether it be the expression of the collapse of the brain which is always observed when the excitability of that organ has been induced for a long time or with exaggerated intensity (cerebral neurolysis). In comatose pernicious fever, as already stated, there are no prevailing phenomena of cerebral excitement—the coma is primary. Thus, even though the patient present great febrile reaction, the manner in which the disease began will serve to exclude cerebro-meningitis from the diagnosis.

The previous existence of acute articular rheumatism, the coincidence of pain and swelling of the joints, are valuable elements by which to distinguish cerebral rheumatism of apoplectic form from comatose pernicious fever.

The precedence of delirium or convulsions, together with the presence of a large amount of albumen in the urine, helps us not to confound uræmic disease of the brain with comatose pernicious fever. The phenomena peculiar to convulsive hysteria, or those proper to anomalous hysteria, are of avail for the recognition of hysterical coma.

Case 10.—Luiz Poyares, Portuguese, thirty-five years old, carter, strongly built, residing in Andarahy Grande, entered the Santa Izabel ward on the 17th August, 1874. He had suffered from intermittent fever in February, 1873, according to several students who had seen him in the fifth ward, where he was under treatment for several days. Having entered comatose at six o'clock in the evening, the physician on duty prescribed a stimulant purgative enema, blisters to the legs, and six leeches to each mastoid process. The persons who brought in the patient could tell nothing about him but his name, age, residence, and occupation.

August 18th. Face flushed and congested; moderate degree of coma; when urgently aroused, the patient opens his eyes and utters some confused and unintelligible words, falling at once into the same stupor; resolution of upper limbs, some automatic movements in lower; absence of paralysis of motion; deadened sensation; pupils a little dilated; exaggerated heat in frontal region; axillary temperature 39.6° (103.3° F.); pulse 90, hard. Belly tympanitic; hepatic region painful—strong pressure over this region excites some contractions in patient's face indicating pain; the liver is three fingers' breadth beyond the right costal margin; spleen larger than normal; the tongue cannot be examined, notwithstanding efforts to this end. The purgative enema of the evening before has excited one large evacuation; the blisters have burned well, and the leeches drawn a little blood. The patient has urinated in bed, and the bladder is empty.

Ordered twenty leeches to margin of anus; a purgative enema, and after its action an enema every three hours containing one gramme of sulphate of quinine, until four have been taken; one gramme of sulphate of quinine on the denuded surface left by blisters; as soon as the patient can open his mouth and swallow, to take one gramme of sulphate of quinine in a glass of sulphuric lemonade.

At 5 P.M. the interne and two students, designated by me, found the patient much better. Only two enemata of quinine had been administered; the leeches had drawn enough blood, and it still flowed from some of the bites. The purgative enema produced a copious evacuation. The coma had in great part disappeared; the patient answered questions put to him, but with difficulty. Intelligence dull; axillary temperature 38.2° (100.8° F.); pulse 86. The interne gave with his own hands one gramme of sulphate of quinine (which the patient took well by mouth), and advised that the two remaining enemata be given.

August 19th. Condition extremely flattering. Deafness of cinchonism very manifest; entire absence of cerebral symptoms; intellect clear, answers very precise. Axillary temperature 37.4° (99.3° F.); pulse 78. Tongue large, moist, and hardly coated at base. Appetite. Belly relaxed; liver still enlarged, as also the spleen; urine a little loaded with sediment.

Ordered one gramme of sulphate of quinine by mouth, and one gramme by enema; natural Vichy water; frictions with tincture of iodine in hepatic region; soup and broth.

The doses of sulphate of quinine were gradually diminished up to the 22d, when they were suspended. The patient had fuller diet day by day, and was discharged convalescent on the 26th.

Case 11.—Sabino, free mulatto, fifty years of age (supposed), was brought to the Santa Izabel ward on the 5th of September, 1875, at 8 A.M., in a state of profound coma. The person who accompanied him reported that on the 4th at 2 P.M. he had chills, and then fever which lasted till noon next day, and was better up to nightfall, having taken merely rosemary tea and burnt brandy, which caused him to sweat profusely.

Condition on admission: Profound coma; face puffy; resolution of all four limbs; axillary temperature 39.8° (103.6° F.); pulse 86; belly tympanitic; liver much congested; spleen of normal size; respiratory system normal. Urine not examined.

Ordered twenty leeches to verge of anus, and six to each mastoid process; blisters to calves of legs; a stimulating purgative enema, and after its action an enema every three hours containing one gramme of sulphate of quinine, until four are taken.

At 2 P.M the patient died, having hardly taken the first enema of sulphate of quinine.

Autopsy (nineteen hours after death): Great injection of arachnoid, pia mater, and cerebral tissue; sero-sanguineous effusion into lateral ventricles. Thoracic organs sound. Liver much enlarged, turgid with blood and of dark red color; spleen slightly enlarged, friable, breaking down easily on slight traction of its parenchyma. Bladder contracted, mucous membrane hyperæmic, and containing about an ounce of urine free from albumen. Stomach and intestines normal.

IX. In the *cerebro-meningeal* form, frequent in excitable persons of marked nervous temperament, and in second childhood, some anomalies are observed in the succession of the cerebral symptoms, so that the experienced practitioner recognizes that he has not to do with a clear, primary, protopathic or essential cerebro-meningitis. When the febrile stage supervenes, delirium appears, almost always noisy and attended by great agitation. If the delirium is very intense or prolonged, it is temporarily succeeded by coma, reappearing later on the paroxysmal exacerbation of the fever. During the hours of febrile remission, when the thermometer indicates lessening of a degree or more (Centigrade) in the axillary temperature, whether or not there be perspiration, the patient is calmer, or becomes comatose if the cerebral excitement has been very exaggerated. Strabismus, general or partial convulsions, cramps, subsultus tendinum, carphologia, crucidismus, and all other cerebral symptoms which appear, undergo notable oscillations in the course of the twenty-four hours, closely following the variations of febrile temperature. The liver and spleen, which remain untouched in idiopathic cerebro-meningitis, increase in size and become congested and painful in cerebro-meningeal pernicious fever.

Case 12.—There entered the hospital of Nossa Senhora da Ajuda, in February, 1872, a lad twelve years of age, shop-boy, with high fever (102.9° F.), dry skin, headache, tongue furred, liver a little congested, and bowels constipated. These symptoms had been preceded by a severe chill the night before. At the visiting hour (10 A.M.) I prescribed an emetic of ipecac and antimony, a purgative enema, sinapisms to the lower extremities, and one gramme of sulphate of quinine to be given as soon as the fever should diminish, the skin become moist, and some evacuations occur. The patient vomited and purged profusely, became free from headache, and completely apyretic at 3 P.M. when the nurse gave him the dose of quinine in a glass of sul-

phuric lemonade. As soon as the medicine was swallowed it was ejected by vomiting. The zealous and intelligent interne of the establishment, on being informed of this, ordered the same dose of quinine repeated in four pills, which the lad took at 5 P.M., drinking after them half a glass of sulphuric lemonade strongly acidulated. At 8 P.M. the headache and fever reappeared, without preceding chill.

The next day I found the patient in great agitation and delirium, face flushed, eyes brilliant and injected; he tried to get out of bed, believing himself threatened by hell-hounds present in the ward; great loquacity; convulsive tremor of upper limbs; convergent strabismus of both eyes. Exaggerated heat of forehead; axillary temperature 40.2° (104.5° F.); pulse 128. Tongue tremulous, dry, with a rust-colored spot in the centre. Abdomen ballooned, tympanitic, and very sensitive to percussion, especially in hepatic region; liver enlarged; spleen of normal size; urine scanty. The patient would not allow suitable exploration of respiratory organs.

Ordered twelve leeches to verge of anus, and six to each mastoid process; a mixture containing eight grammes of laurel-water, ten centigrammes of extract of belladonna, two grammes of bisulphate of quinine, and thirty grammes of syrup of hyoscyamus, to be given in spoonful doses every two hours; a stimulant and purgative enema, and after its operation two enemata of sulphate of quinine of six decigrammes each, at four hours' interval; blisters to calves of legs; compresses steeped in oxycerate and frequently renewed, upon the shaven head.

At 8 P.M., visiting the patient for the second time, I found him with paralysis of the œsophagus, drowsiness interrupted by sub-delirium, lower extremities cold, and belly very swollen. The axillary temperature was 40.8° (105.5° F.); pulse 136, very small and weak. At 3 the following morning he died.

No autopsy was performed.

Case 13.—A boy of seven years, always enjoying good health, was attacked by a subcontinued fever, which resisted for three days the various antipyretic means employed to combat it. The attending physician, presuming that it was a pyrexia of malarial origin, administered six decigrammes of sulphate of quinine during full febrile reaction. Three hours later the child was bathed in sweat, the heat diminished, and the pulse lost a little of its frequency; two hours after this remission induced by the quinine, the fever increased, the skin became dry again, the pulse very frequent, and a series of grave nervous symptoms appeared: delirium, convulsive movements of upper and lower limbs, general hyperæsthesia, and opisthotonos. Thirty-six hours after the appearance of these cerebro-spinal phenomena I was called to see the little patient, who had at his bedside three distinguished physicians, his very near relations, Doctors Benjamin Ramiz Galvao, Sebastian Saldanha da Gama, and Queiroz Carreira.

I found: Incomplete coma; delirium when patient is aroused from the comatose state; sharp cries, groans, sighing respirations, automatic movements of upper limbs, spasm of lower limbs; general hyperæsthesia, particularly in the calves; opisthotonos and some trismus; tongue dry; difficulty of deglutition; belly prominent and tympanitic; liver increased in size; spleen very large and sensitive to percussion; febrile heat marked; pulse frequent and small. Some mucous râles scattered over both lungs.

Ordered a mixture containing two grammes of bisulphate of quinine, to be given in teaspoonful doses every hour; blisters to thighs; a purgative and antispasmodic enema; fomentations to spine with mercurial and belladonna ointment.

Contrary to the expectation of all, the little patient managed to recover at the end of three weeks, making constant use of the sulphate of quinine in decreasing doses. He remained deaf for a week.

X. The *convulsive* form is very common in early infancy. The child, after some simple intermittent attacks, or in the enjoyment of perfect health, is seized with convulsions, which sometimes become general, constituting a true attack of eclampsia, or are partial and limited to the muscles of the face and one of the upper limbs. These convulsive paroxysms are at times accompanied from the beginning with well marked febrile reaction, or again the fever appears only after they have ceased.

In general the convulsions are attributed to the process of dentition, or to the presence of intestinal worms, or to a disturbance of digestion. Cathartic medication is usually employed, and after its operation the little patient uses an antispasmodic mixture. The convulsive movements cease, the child reacquires its usual briskness, and everything indicates that the danger is past. But later on the paroxysm recurs, more violent and prolonged than the first, and leaving as a trace of its passage a comatose condition of

the highest gravity. If the first attack rarely occasions the death of the patient, the second is as a rule fatal, and only in rarely observed exceptions is life maintained after the third.

For the diagnosis of the convulsive form of pernicious fever the physician should keep in view the precepts to be formulated further on, as well as the existence of fever—seeing that, as a general rule, the reflex convulsions connected with difficult dentition, indigestion, or the presence of ascarides lumbricoides in the intestines are not attended, preceded or followed by the febrile state.

Case 14.—A child, three years of age, female, strong and healthy, daughter of a physician residing in Sao Christovao, became dumpish and lost appetite, going to lie down a great part of the day instead of running about and playing as she was used to do. Her mother noticed that from noon on, the palms of her hands kept very hot, and she perspired much during the night. The father gave her a purgative of castor oil and prescribed frictions of sulphate of quinine in aromatic vinegar.

On the 12th of June, 1874, the child was seized with a violent attack of convulsions, which lasted from 5 in the afternoon to 8 at night. After the convulsive movements, entirely clonic, fever appeared, together with coma. When I saw the little patient, at 8 A.M. on the 13th, the coma had already disappeared, there was still some fever, the tongue was furred, the liver much enlarged, and the abdomen doughy. I ordered an antimonial mixture, and sulphate of quinine internally in coffee, by enema, and in frictions. The mixture induced profuse vomiting, evacuations, and diaphoresis; the child took six decigrammes of quinine by stomach, the same by rectum, and two grammes endermically. At 6 P.M. I found her without fever and doing well, asking for food.

On the 14th, 15th, 16th, 17th, and 18th, she continued the use of sulphate of quinine, in gradually diminished doses. She recovered entirely and regained her usual strength.

Case 15.—A boy five years old, blonde and lymphatic, son of a foreign merchant, residing in the Rua S. Clemente, was suddenly attacked by convulsions at nightfall of the 21st December, 1873. The physician called to see him thought it a case of indigestion, as the child had eaten cauliflower cooked with butter at dinner, and bananas for dessert. This opinion seemed indisputable, since the stomach had rejected by vomiting during the convulsions a part of the food ingested, in an advanced stage of chymification. A purgative enema (thirty-two grammes of castor oil), and later on a mixture of the tincture of chamomile and belladonna, were the prescriptions during the night of the 21st and the 22d. The boy remained during the latter day greatly prostrated, with insomnia and entire loss of appetite. Whenever he dozed a little, he awoke with a start, calling on his mother. At 5 P.M. fresh convulsions appeared, tonic and clonic, prolonged till six o'clock the following morning. I saw the patient in consultation at 8 A.M. I found him with upper and lower extremities completely algid and bathed in clammy sweat, pulse extremely frequent and small, the trunk (especially the chest) with a very high temperature and also covered with profuse perspiration, respiration oppressed and stifled, intellect dull, with drowsiness, belly tympanitic, liver enlarged and painful on palpation and percussion, spleen normal, tongue furred, and urine much decreased. I diagnosed a convulsive pernicious fever, considered the case hopeless, and advised the use of sulphate of quinine in large doses by the mouth, by enema, and by friction, *Agua de Inglaterra*, sinapisms to the extremities, and fomentation of abdomen with oil of chamomile and essence of turpentine. All this was done, but in vain; the boy died at 2 in the afternoon.

XI. In the *delirious* form of pernicious fever, the patient presents as the predominant symptom during the paroxysm a delirium of varying character. Sometimes it is furious delirium, a true acute mania; the subject becomes greatly agitated, cries, vociferates, insults and attempts to injure the people about him, tries to get out of bed, to fly, believes himself threatened and pursued by vindictive enemies, hears voices insulting him, etc. This form of delirium, which is that most frequently observed with us, is often accompanied by fever, but again is present without the least febrile reaction. After it has lasted for the space of some hours, the intellectual disturbance calms little by little, reason regains its rule, and profuse perspiration bathes the entire surface; the patient falls into a lethargy, and sleeps quietly and deeply.

In other cases the delirium does not manifest itself so briskly; the patient becomes irascible, intolerant, inconsequent and unreasonable; commits improper acts, at variance with his education and habits; expresses

himself in unaccustomed terms to his friends and relations; he seems entirely different from what he is in his normal state. These unusual phenomena, which ordinarily pass unnoticed at the beginning, are sometimes attended by hallucinations of the senses. I have seen a child seven years of age attacked by paroxysms of pernicious fever characterized as follows: At ten o'clock at night he awoke with general tremors due to a violent chill; then he began to cry out, saying that many fierce dogs were trying to bite him, and pointed to one corner of the room where he said these dogs were. Thus he passed two hours, surrounded by his parents trying to pacify him, and then became bathed in sweat. The crisis passed, he slept tranquilly, and arose the following day well, with barely some depression and loss of appetite. He had three paroxysms, gradually more serious and prolonged; the parents had given him a vermifuge, supposing the illness to depend on the presence of ascarides lumbricoides in the intestinal canal.

When I was called to see the patient, he had had the third attack and was still agitated, uneasy, and overpowered by a certain terror; the pulse was frequent, and the temperature of the skin above the normal; the tongue was covered with fur, and the bowels were constipated and doughy; the liver and spleen kept their physiological size. I prescribed a purgative of castor oil, and seventy-five centigrammes of sulphate of quinine to be given in three doses, one every two hours, after the operation of the cathartic. The night of this day the child had an intermittent paroxysm, characterized by the three stages, but no delirium or hallucinations. The sulphate of quinine was continued in the same dose three consecutive days, and afterwards in doses progressively diminished. At the end of a week the boy was completely cured.

Case 16.—Jose Gonçalves Tinoco, Portuguese, aged thirty seven, employé of the Tramway Company of S. Christovao, residing in the Rua do Machado Coelho, entered the Santa Izabel ward on the 11th July, 1873. Had had at various times attacks of intermittent fever, and presented the external appearance of malarial cachexia. Is not a hard drinker.

Condition: Yellowish pallor of face and rest of body; conjunctiva pale; no dropsy; axillary temperature 38.8° (101.8° F.); loss of appetite; nausea; constipation; liver and spleen enlarged; cardiac sounds normal; bellows murmur in carotids. Respiratory and urinary organs normal.

Ordered an emetic of ipecac and antimony; one gramme of sulphate of quinine after operation of emetic; friction with tincture of iodine in right and left hypochondria; chicken broth, coffee and wine.

The patient had an attack of fever on the 13th and 14th; the first began at 6 P.M., and ended at 11 A.M. the following day. Took this day twelve decigrammes of sulphate of quinine in two doses, the first at noon and the second at 3 P.M. The other paroxysm appeared at 8 P.M., terminating at 2 in the afternoon of the 15th. The patient took one gramme of sulphate of quinine at 3 P.M. and another gramme at 7 P.M. At nine o'clock occurred another attack accompanied by a violent delirium, which rendered the use of a strait-jacket necessary. The following day I found the patient still delirious, bathed in profuse sweat, with axillary temperature of 39.2° (102.5° F.) and pulse 120, tongue very furred, liver still more enlarged than on preceding days, and spleen of same size as observed up to then.

℞ Bisulphate of quinine, 3 grammes.
Sulphate of morphine, 0.05 gramme.
Syrup of orange-peel, 30 grammes.
Water, 100 grammes.

A tablespoonful every hour.

Also a stimulant and purgative enema, and blisters to calves of legs.

At 5 P.M. the interne found the patient calm, with only some sub-delirium; had slept quietly two hours; body bathed in profuse perspiration, axillary temperature 38.6° (101.5° F.), and pulse 98. The mixture not yet exhausted. The blisters had not yet drawn.

July 17th. Nearly absolute deafness—necessary to shout to make patient hear; wandering and vertigo; no delirium. Axillary temperature 38.2° (100.8° F.); pulse 90; large amount of sweat soaks the patient's garments and bed-clothing. Tongue still much coated; liver greatly enlarged, but a little less than the day before; spleen in same condition. Two bilious stools from enema. Urine less bilious, free from albumen. Respiratory organs sound. For the first time a soft systolic bellows-murmur heard at base of heart, extending to apex.

Ordered same mixture repeated, reducing the proportion of quinine to twelve decigrammes; a purgative enema; 120 grammes

As has been before mentioned, the infection of tuberculosis in infants and young children more often takes place through the glandular system of the intestines than through the mucous surface covering the respiratory apparatus. This fact emphasizes the importance of most carefully scrutinizing the milk supply, and the cattle from whence the milk is procured, in order that no tubercular infection may be incurred from that source. I am inclined to look also with considerable distrust on the common practice of feeding young infants with scraped raw-beef, believing it to be possible thereby to infect young children with tuberculosis, not to mention the possibility of other parasitic infectious diseases, as for example trichinosis. As the infant grows and develops into the child, new sources of infection for the development of tuberculosis are found to exist in the glands, so abundantly to be found on the surfaces of the respiratory mucous membranes.

The crypts and follicles of enlarged tonsils form a nidus and resting-place for the retention and development of tubercle bacilli; the same may be said of adenoid growths in the vault of the pharynx, and of a catarrhal condition of the mucous membranes of the throat or nasal passages, whether produced by the above-mentioned or other causes. This chronically inflamed condition of these mucous membranes (commonly called catarrh), I believe to be a powerful predisposing cause of pulmonary consumption. Another reason why enlarged tonsils and other growths in the pharynx should always be removed, is, that they in great measure prevent the proper development of the chest and lungs. In all cases of chronic catarrh I believe it to be of the utmost importance to insist upon the habitual and thorough cleansing of the nasal and post-nasal cavities with antiseptic solutions. If this is not done, the secretions of the part become more or less putrid, the resisting power of the blood-serum of the organs on which we depend for the destruction of these and other pathogenic micro-organisms becomes weakened or destroyed, and the body is thus rendered an easy prey to whatever poisonous germ may then find entrance.

As will readily be understood from the previous part of this paper, the preventive treatment of this dread disease is by far, I believe, the most important. Cases of this disease are, however, ever present with us, and the momentous question then presents itself: What are the principles of treatment that should guide the physician in the management of cases of tuberculosis? The best answer to be given to this, therefore, will probably be found by making another inquiry, viz.: How are cases of tuberculosis (more especially tuberculosis of the lungs, or pulmonary consumption) spontaneously or by medical aid cured? That these cases are cured, is proven by the universally admitted fact that a large proportion of cadavers of persons who have died from many different diseases, and who during life presented no apparent disease of the respiratory organs, have on post-mortem examination shown indubitable evidences of having at varied periods of their lives suffered from tuberculosis of the lungs.

Dr. J. Hughes Bennet, in his classical work "Clinical Lectures on Medicine," says (p. 680) that the spontaneous arrest of tubercle in its early stages occurs in the proportion of from one-third to one-half of all the individuals who die after the age of forty. The observations of Roget and Boudet, made at the Salpêtrière Hospital in Paris, amongst individuals who were generally above the age of seventy, showed that from one-half to four-fifths of such persons had recovered from tuberculosis.

As the larger proportion of these cases never received any medical treatment for their tubercular disease of the lungs, it must be perfectly apparent that the fluids or tissues of the body must have the power to destroy and render inert these poisonous micro-organisms. Where does this power reside? Metchnikoff thought he had discovered the answer when he elaborated the doctrine of phagocytosis, or the destruction of bacteria and other micro-organisms by the leucocytes or white corpuscles of the blood. Nutall, Buchner, Nissen, Lubarsch, and in this country T. Mitchell Pruden and many others, have shown conclusively, however, that the power of destroying the bacteria, etc., resides not in the leucocytes, but in the blood-serum. This preservative power of the blood-serum also explains why it is that the human body

is able to resist the destructive action of the innumerable poisonous micro-organisms which continually surround us. They exist in every breath of air we draw, in the articles of food we consume, and in much of the water we drink. Uncounted myriads of them are to be found in the digestive apparatus of persons who seem to be in all respects perfectly healthy. Professor Buchner, of Germany, states the time usually required for one microbe or germ to become two, by the process of division, is fifteen minutes. At this rate it is computed that a single microbe would produce in twenty-four hours a million million million times the present human population of the earth. Professor Law, in a paper published recently in the *Pharmaceutical Era*, estimates that a single bacterium dividing and redividing would produce in forty-eight hours, if undisturbed, 281,500,000,000, which in bulk would fill a half-pint measure—all produced in two days, from a single germ measuring the $\frac{1}{15000}$ part of an inch.

Pathological bacilli are just as numerous where found, and divide as rapidly. Professor Böllinger states that a cubic centimeter (about one-fourth of a fluidrachm) of phthisical sputum (from a case of pulmonary consumption) contains from 810,000 to 960,000 tubercle bacilli. In an ordinarily copious expectoration the consumptive patient deposits nearly a million bacilli into his cup, and in an ordinary day he throws thirty or forty millions of these micro-organisms into the world. Then, at a low estimate, ten thousand tuberculous patients now living in New York City daily expectorate some 300,000,000,000 tubercle bacilli.

There exist, however, two conditions which have a most powerful effect in increasing or diminishing the power of the blood-serum to destroy these poisonous micro-organisms. The first of these here to be mentioned is the high or low condition of the health of the individual at the time of receiving the infection. If the individual is in a high state of health, his blood-serum is then capable of destroying an immense number of these pathogenic organisms, and he is thus rendered immune to the disease.

Let us apply, then, the lesson to be drawn from the above-mentioned facts to the principles to be observed in the treatment of tuberculosis. Patients with tuberculosis can be cured when seen in the early stages of the disease, and when they can be placed under proper conditions of hygiene. We enjoin perfect cleanliness; we direct that they shall receive an abundant supply of easily assimilated and nourishing food; we send them away from the vitiated and impure air of the city, to breathe the pure and reviving air of the country; we give them cod liver oil, tonics, the preparations of iron, iodine and its compounds, beechwood-tar creosote, with now and then a little codeine or morphine to allay the cough and procure sleep. This is not a long list of remedies, and in it there is nothing new. One fact to be noticed is that all the remedies which the experience of ages has taught us to be useful in tuberculosis are reconstructive medicines, which tend to build up the body and improve the health.

It is needless to dwell upon the stupendous failure of the lymph from which so much was hoped when it was introduced to us by the illustrious Robert Koch. It is perhaps presumptuous in me to have an opinion on a matter that belongs so especially to those who have made bacteriology a special study, yet I cannot help expressing a conviction that we cannot expect as much benefit as we hoped we would receive from these investigations. It seems to me that such laborers are working in a wrong direction. Since the world began, tuberculosis has always been cured in one way, namely, by improving the hygiene or general health; and how the injection into the system of a concentrated extract of the poisonous materials elaborated by the bacilli can do this, I am unable to discover. I have had the opportunity of studying the effects of the hypodermatic injection of the lymph sent by Doctor Robert Koch to this country. My limited experience of its use leads me to believe it to be a most energetic and poisonous fluid, and one that is much more likely to injure than to benefit patients who are suffering from tuberculosis.

The second condition which greatly influences the fatality of tuberculosis (as well as that of every other infectious disease due to the presence of poisonous micro-organisms), is that the deadly effects produced de-

pend upon the number of bacilli introduced into the body at the time of receiving the infection. Experiments upon animals with many varieties of poisonous bacilli show a very close analogy to the phenomena produced by other poisons, such for instance as opium, etc. If the dose of the poisonous bacilli is large, the animal dies; if it is small, his blood-serum may destroy this limited number and he may recover. How, then, can we diminish the number of these bacilli in the immediate vicinity of our patient, and thus prevent him taking into his system a deadly dose of these poisonous germs?

The answer presents itself at once: Send your patient immediately to the sea-shore or country; still better, if his means permit of it, send him to the great table-lands of our country west of the Mississippi, to New Mexico or to some parts of California. He will come back to you perhaps in a year or two so changed and improved in physical appearance that you will scarcely recognize him. Above all things, never send your consumptive patient to a sanitarium or a health resort for consumptives, for if you do you have sealed his fate.

A great deal can be done to prevent the further infection of your patient, by the scrupulous disinfection of the sputum, and its prompt destruction. Paper boxes for receiving sputum can now be procured for a trifle—these with their contents should be burned each day, thus removing at least one source of contagion. Tubercle bacilli in abundance have been found in the dust of rooms occupied by tuberculous patients—so the room should be as thoroughly cleansed and disinfected after occupancy by consumptives, as after having been used by patients suffering from any of the so-called contagious diseases.

Washington, D. C.

THE EXCRETION OF MEDICINES.

BY DOCTOR H. PASCHKIS.

Researches into the excretion of medicaments are of ancient date, but they have never been systematically pursued. The thing of prime importance is to determine whether any individual medicine is the decursor of an organ or not. Now, only those agents can be regarded as organ-decursors which have no relation to the constituents of the living organism, and which it is hard to modify chemically. In this class we accordingly must not include sulphur, the sulphides and sulphate salts, the nitrites, and all other substances which are completely consumed in the organism, such as paracresol and toluol. Certain bodies form in the organism highly complex combinations, and in the case of several medicinal agents the conditions are very complicated. Thus, for example, we have yet no explanation why phenol is in part excreted as phenol-sulphuric acid, and in part as glycuronic acid, a certain remnant passing off unmodified; it is probable that the agent is either oxydized or reduced ere it forms the respective combinations. Further, camphor first yields by oxydation camphorol, which is then coupled with glycuronic acid and transformed into campho-glycuronic acid. Chloral, on the other hand, is reduced into trichlorœthyl-alcohol before urochloralic acid is formed.

Many substances undergo combustion in the organism, yielding carbonic acid and water—alcohol in but small quantities, though larger quantities appear unmodified in the urine; complete oxydation follows only after the intermediate formation of aldehyde and acetic acid; and by interrupting or suppressing the process of oxydation, the presence of these intermediate products in the urine can be shown.

Particular resistance to the action of the bodily juices is manifested by the salts of the heavy metals—the metal is excreted from the body as such, but the salts are transformed into the sulphides in the intestine. If the deposition of silver in the skin is to be regarded as an organ-excretion, then silver may be considered after a manner an organ-decursor.

The alkaloids can be shown in the urine; they are accordingly not completely burned in the organism. Morphine appears in the urine only when toxic doses are employed.

The glucosides are probably not organ-decursors, and when large doses are administered they are to be found undisintegrated in the urine; in many cases there seems to be no splitting-up. Thus disintegration-products of digitalin are altogether unknown,

since that substance is probably totally destroyed.

The sulphates of the alkalies are organ decursors only in so far as they are administered in small doses; administered in larger doses, a part is excreted unmodified in the urine, the other part being reduced in the fæces.

The assertion of Husemann that an organ whose secretory function has been stimulated excretes substances which under normal conditions are excreted by a different organ, is contradicted by the fact that even in pronounced mercurial salivation, only mere traces of this metal can be shown in the saliva. Purgatives like calomel, administered per os, are to be found chiefly in the stools; but they are in the intestine before absorption.*

Volatile substances (ethereal oils, turpentine, etc.) depart from the organism with the expired air; in this process such substances may develop a secondary action on the organs which excrete them. Thus, turpentine exerts a disinfectant action on the lungs; it is to be found in the urine both unmodified and in the form of glycuronic acid—in the first form it limits secretion, in the latter it exerts an antiseptic action on the bladder. Inasmuch as many purgative remedies pass directly into the milk, caution with respect to nurses is always in order, especially when administering alkaloids, and more particularly the alkaloids of opium; on the other hand, sulphate of magnesia may be administered without misgivings.

The skin plays an important rôle in the excretion of medicinal agents. Quinine, copper, indigo, and ethereal oils choose this path of exit from the organism; a secondary, topical action, as with iodine and bromine, may thus often be realized. When excretion is impeded in the intestine, vicarious excretion may proceed through the skin: to prevent bromine and iodine acne, the French first resort to disinfection of the intestine. Bismuth, taken intestinally, is absorbed in the intestine and again secreted in the intestine. Tartar emetic, even when subcutaneously administered, exerts an emetic action through subsequent deposition on the mucous membrane of the gastro-intestinal canal.

The quantity of the excreted agent is determined by the diffusibility and affinity to the constituents of the organism, as well as by the temperature, of the agent introduced. Time and mode of application determine the period elapsing between the introduction and excretion of the remedies.

Iodide of potash is excreted in about forty-two hours; sodium salicylate in twenty-four; with quicksilver there is, properly speaking, no termination of excretion.

Many medicaments are in great measure retained in the organism and stored up in the tissues; this deposition occurs with undisintegrated substances, or else supervenes only after they have been oxydized or reduced. The deposited bodies may now be drawn into the circulation by certain factors, as is the case in lead and mercurial poisoning, both plumbum and hydrargyrum being secreted through the action of iodide of potash.—Elevation and acceleration of metamorphosis are the causes of this process.

Breuer and Herz remark that bromine also passes into the milk; witness the supervention of bromine acne in nurslings whose nurses take bromine, as also the existence of a bromine mastitis. Breuer, furthermore, cites a case in which bromine was retained in the organism for three weeks.

* Doctor Paschkis was the first who succeeded in demonstrating the presence of mercury in the milk, in addition to the urine.

PATHOLOGY AND TREATMENT OF MEMBRANOUS CROUP.

BY B. H. DETWILER, M.D.

Membranous croup has been encroached upon by bacteriologists to such an extent that it is no longer considered a disease *sui generis*, but only an exudate, the result of diphtheria caused by the Klebs-Loeffler bacillus. Doctor Wilson, in his exhaustive article on "Laryngitis" in the Theory and Practice of Medicine (Pepper, 1894), says:

So overwhelming is the preponderance of the unquestionably diphtheritic cases, that many competent observers regard all cases as of that nature—an extreme view, that finds ample justification in the fact that no criteria have yet been established by which the differential diagnosis between diphtheritic pseudo-membranous laryngitis and the so-called non-

contagious membranous croup of the dualist can be made by the clinician during life or by the pathologist after death, save only by the presence or absence in the exudate of the Klebs-Loeffler bacillus. In both, the symptoms are the same, the course and termination of the attack are not different. . . . . Physicians who look upon every case of pseudo-membranous laryngitis as a probable case of diphtheria enjoy the practical advantage of erring, if err they do, upon the safe side.

The celebrated Doctors White and Keen, in their late Surgery, endorse the same theory. Were this correct in practice the course of the physician would be clear, but to the older physician the demonstration of the unity of these two diseases is not as yet complete. They are two distinct diseases. Membranous croup was one of our terrible diseases, blanching the cheek of every mother upon the slightest whistling cough of her darlings, before the more dreaded name of diphtheria was a household word. In 1856 I saw my first case of membranous croup, and it proved fatal. In 1858 the first case of diphtheria came under my observation, which then became epidemic. The course of these diseases was widely different, but when the larynx became involved their termination was the same—death. Doctor O'Dwyer says that one child in ten with well marked symptoms of laryngeal diphtheria recovers under medical treatment. Doctor Wilson says that under all forms of treatment the mortality ranges from sixty to eighty per cent., and that all cases should be treated alike as for diphtheria. It is the fact of this large mortality which I especially wish to impress. I do not consider it necessary to call attention to the anatomical construction of the larynx, nor the distribution of the squamous epithelium upon the lining tissues of the pharynx and mouth, and the ciliated upon the vocal cords; nor that these epithelial cells determine whether the exudation be croupous or diphtheritic. This is the point that should be fully considered, and upon which the duality of these diseases depends. Doctor Wilson says: "Ciliated exudation is termed croupous, and squamous diphtheritic; hence the German pathologists are correct in speaking of this process as a croupous diphtheritic inflammation." Croupous inflammation is in all cases the exudation that involves the vocal cords, from their anatomical construction of ciliated instead of squamous epithelium. If this exudation be exposed to the Klebs-Loeffler bacillus, there is no question of the attack being diphtheria; but should it be simply inflammation of the vocal cords, why not treat it as any other inflammation? Why wait till the exudation becomes formed?—if diphtheritic, the mortality is so great that it is almost hopeless; and if not, why allow this exudate to become so firm that it is equally hopeless? The cause of death is mechanical obstruction in one case, and in the other mechanical obstruction with septic poisoning due to specific microbes. The patient will be a croupy child—probably its second night with a harsh, rough cough and high fever. The preceding night it had a few paroxysms of croup, was restless, with some fever. During the day it was apparently well. There is no exudation in the throat and nose, nor any enlarged cervical or submaxillary glands. This is a case of acute laryngitis of childhood, but in the morning you find instead of convalescence a short, hacking cough with continued fever, and you are not so sure of your diagnosis. If there are bacilli of Klebs-Lœffler in the trachea below the point of observation, the child will die; but if the thickening of the vocal cords by this croupous exudation is simply inflammatory, why not treat it as for inflammation? Twelve hours will determine whether you can restore the child to its mother's arms or have it die the slow death of strangulation, or modified by the happy intubation of O'Dwyer with its record of decimation. It is cyanosed, breathing with the clavicular space indrawn, and its throat clasped with its tiny hands to avert strangulation. You place two or three leeches on the larynx, with one-fourth-grain doses of calomel every half-hour until the characteristic spinach stools are voided; after full depletion of four or five hours, you check the bleeding points, apply a blister, and the cough will diminish, the cyanosis disappear, and in a couple of days the child will be convalescent. During this treatment, inhalation of steam with lime-water will be grateful and curative.

The first case that I treated in this manner was in 1867. The distinguished physician who called me in consultation stated it was

hopeless, and that the boy, two years old, must die. As a *dernier ressort* I applied two leeches, and in five hours applied a blister; he convalesced rapidly. I have had many such cases in these years—one especially, when the consulting physician insisted on tracheotomy, but after depletion neither intubation nor tracheotomy was required. Another where I saw the boy of two years at 6 P.M. on the evening of the second day after a croupy night. At 9 the same evening I found him cyanosed, and so much oppressed they could not hold him in his crib. I applied two leeches, and followed with a blister. In forty-eight hours he was convalescent.

Should this exudate even be diphtheria located below the point of observation, the child may recover, but will probably die, as the treatment (beyond the abstraction of blood) is what is considered proper by many who pride themselves on their success in treating this terribly fatal disease; but if it is not surely diphtheria, and there is a bare possibility of it being a croupous exudation on the vocal cords, why not use the depleting and revulsive treatment instead of relying upon the treatment that has a standard mortality of sixty to eighty per cent., and rely upon removing the immediate danger of strangulation by intubation or tracheotomy? I select my cases, and in doing so have not lost a single case of membranous croup, nor have had an intubation. My mortuary record of diphtheritic exudation extending into the larynx is no better than that of my compeers.

I am persuaded it is of importance that the recognition of the duality of this disease be made early, and that it is not good practice to treat all cases of croup on the so-called safe side of diphtheria with its terrible mortality record, and that it is the duty of every practitioner to diagnose *early* every case of croup; if diphtheritic, treat it accordingly; if membranous, give it the advantage of depletion and revulsion by the prompt administration of calomel in quarter-grain doses every half-hour till the characteristic spinach stools are secured, inhalation of steam from lime-water, which dissolves the croupous exudate upon the vocal cords (which causes the disease) and prompt depletion for four or five hours by leeching and followed immediately by a cantharidal blister, which treatment will result in certain and speedy cure. Without the help of intubation or tracheotomy I have followed this course since 1867 without the loss of a single patient.

Williamsport, Pa.

THE GREAT BAR TO TRUE MEDICAL PROGRESS.

For one competent and conscientious worker there are ten who are incompetent and unconscientious, and who in divers ways hinder our progress and spoil our present possessions. Intolerant of the patient and painful toil of the true worker, acute in the power of superficial observation, gifted with a certain showy versatility, quick at catching hold of new ideas, ingenious in guessing, crude in experiment, loose in therapeutic trials, hasty in speculation, strong in dogmatic assertions, accomplished in the transfiguration and use of other men's work, finding what they want wherever they seek it, unhindered by difficulties, facile in speech, ready in writing, thirsty for notice—such men, now, alas, not uncommon in medicine, beget papers so quickly they have no necessary relation to time, observation, or thought, and flood our literature with their unworthy if not unveracious lucubrations. The favorite hunting-ground of such men is therapeutics, and their favorite sport the catching of remedies, the putting of them to new uses, and the setting forth of their successful results. These men discern no difficulties, have no failures; they can illustrate their successes by scores of cases, and explain them by the most ingenious theories. There is scarcely any limit to the extent and variety of their achievements, and as they flaunt along in the fullness of self-satisfaction they look down with pitying condescension upon those who, in the straight and narrow way, conscientiously toil with small success in seeking after truth, and find strength and solace in their chosen task.—SIR ANDREW CLARKE.

VERY TRUE!

A doctor with his wits about him can find everything he needs for the immediate care of almost any emergency in any house.

The Medical Age.

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Editorial.

DUODENAL SECRETION AND DIGESTION.

While for some time it has been generally thought that the functions of digestion and assimilation were thoroughly mastered both from chemical and physiological points of view, it has, nevertheless, been understood by working physiologists that a missing link existed—that there were certain phenomena continually manifesting themselves which did not tally with generally accepted ideas; notably, that the complex substance termed pancreatin (made up of *trypsin*, *amylopsin*, and *steapsin*), which in consonance with all teaching should be destroyed in the stomach, as a matter of fact frequently responded to investigation by giving results that did not uphold this view; and also that when a mixture of pancreatin, pepsin, and hydrochloric and lactic acids is ingested by the mouth, therapeutic effects are induced that do not obtain in the least degree when the first-named substance is absent. Consequently, it is evident there is a serious error in physiological teaching, and particularly in connection with the function of digestion in so far as it takes place in the intestinal tract of mammals.

The general teaching is that all secretions of the *prima viæ* below the pylorus, and especially of the duodenum, are invariably alkaline. Experimentors who have made fistulæ, whereby the pancreatic fluid is made to flow through a cannula to the outside of the body and into a specially prepared receptacle, have certainly noticed this peculiarity, but they have not taken into consideration the possible changes that may result from contact of the secretion with the outer atmosphere. Continually, too, is reiterated the statement that while pepsin requires for its proteolytic activity a medium most decidedly acid in character, the complex substance denominated pancreatin can only act in the presence of alkaline media — that the pancreatin is necessarily destroyed when brought into the presence of an acid.

Recently evidence has been deduced that goes to prove the function of digestion within the duodenum, instead of being alkaline, is a distinctly acid process; that, moreover, the pancreatic fluid in its normal condition is never alkaline, but, in greater or less degree according to circumstances, reacts to litmus.

Dalton, Flint, and others are responsible for the statement that the pancreatic juice is alkaline, apparently unaware that it is normally acid, and only becomes neutral, then alkaline, on contact with oxygen. Another source of error is the supposed relationship between the pancreatic fluid and the secretion of the salivary glands as judged by the action of both upon starch within the test-tube of the laboratory.

Space will not permit going into the details of experiments that led to the discovery above outlined, viz., that the secretion of the duodenum in health, or when normally functionating, is invariably acid; it is not pretended that when function is in abeyance alkaline reaction is not possible, particularly when the secretion of the gall-duct preponderates —just as when the stomach is perfectly quiescent the gastric juice is often alkaline; and the reason for the alkalinity in both instances is obvious.

Some time since experiments were instituted by the writer looking to the securing of a pill-coating which would be impervious to the action of the gastric fluid, yet at the same time readily soluble in the duodenum or beyond. In Germany and France experiments had been made in this direction with a product obtained by exhausting horny matters with alcohol, water, and dilute acids—the result being an albuminous substance known commercially as keratin, which, however, proved unsatisfactory and never fulfilled the requirements owing to several causes—chiefly that a large number of medicaments were decomposed by contact with the fluids which were necessarily employed to render the coating insoluble; that a pill mass containing water caused keratin to shrink and fissure; that the process of coating was one

which did not permit the pill to be fixed on the point of a needle, since the latter left an opening that could not be completely closed; and, finally, in a large majority of instances it was found keratin-coated pills passed through the entire length of the bowels undissolved.

A chemist undertook to supply the desired pill-coating from the standpoint of his profession, and ultimately submitted a number of spherules enveloped in a thin varnish of shellac and tolu, his theory being based upon the supposition that the gastric fluid must, under all circumstances and all conditions both in health and disease, necessarily be acid, and that likewise under like circumstances and conditions the secretion of the duodenum is necessarily always alkaline. In proof of the utility of his device he exhibited a series of test-tubes, some containing artificial gastric juice, others a one-per-cent. solution of sodium bicarbonate, in the former of which the pills covered with the tolu-shellac coating remained intact, while in the latter they speedily disintegrated.

On delving into text and reference books in search of evidence of alkalinity of intestinal and duodenal secretions, one is surprised to find such originally expressed as a theory only—a bit of guess-work with no better foundation than the three black crows: that it attained the status of a demonstrated fact, not by any form of investigation and research, but solely by repetition so constant the primary saving clause was speedily lost sight of. Physiologists, while accepting, were at no pains to verify, and incidental studies in the way of pancreatic fistulæ, undertaken for an entirely different purpose, were accepted as corroborative. So, too, experiments in the laboratory, like that of the chemist above mentioned, passed unchallenged, though such manifestly were no way conclusive regarding the digestive chemistry obtaining within the animal economy.

A number of experiments with shellac-tolu pills upon dogs showed that the coating was, as claimed, impervious to the gastric fluids, and also that it was equally insoluble in any portion of the intestines above the rectum. Pills of tartrate of antimony of from one-quarter to ten grains each, thus coated, and administered in various doses, had no effect upon dogs of from eight to twenty-four pounds weight, while the same uncoated, in the same canines, induced most distressing nausea, vomiting, and collapse. Experiments with coated pills of morphine, of strychnine, and of calcium sulphide were under like conditions equally negative. Subsequent and duplicate experiments upon a series of individuals by means of like coated spherules of tartar emetic, podophyllin, etc., proved the coating insoluble in the gastro-intestinal secretions, as the drug effects were entirely lacking which were manifested in an equal number of men who received pills without the coating.

Next were undertaken vivisections during all stages of digestion of food and ingestion of pills, and these revealed the intestinal secretion, including that of the duodenum, to be unvaryingly—though sometimes but faintly—*acid*, depending more or less upon the condition of organic activity; but that when the digestive function was wholly idle, and the intestines and stomach entirely empty, likewise the pancreatic secretion either totally inhibited or in abeyance while that of the liver persisted, there might, sometimes, be temporary but slight alkalinity that rarely extended further than the lower part of the jejunum. Incision of the pancreas *in situ* at the origin of the ducts gave an acid reaction of secretion; pancreatic fluid almost instantaneously became first neutral, then alkaline, on contact with air, and such, gathered by means of fistulæ, presented the latter reaction most markedly after a few seconds' exposure.

Experiments upon dogs at a time when their lacteals were congested and distended as the result of the absorption of digested milk, and while abundance of this fluid still remained in the duodenum to the exclusion of all other fluids—this being the time when the majority of writers insist upon an alkaline condition of the duodenum—invariably revealed a persisting acid reaction throughout the intestinal tract.*

Again, on various occasions, alkalinized milk was digested with the so-called pancreatin (duly rendered alkaline) of commerce, yet the result was invariably the same—the end product was *acid!*

* The rectum excepted, as noted farther on.

Like experiments made with various other substances, especially beef peptone, either alkaline or neutral, gave like results. In the same way, milk and beef peptone, when brought into the presence of pancreatic secretions obtained by means of fistulæ, differed in no way, save in the time necessary to produce the acid end-product. The most marked evidence was obtained by making a pancreatic fistula and introducing the free end of the tube into a bottle of milk.

These experiments have been repeated again and again during a period of four years, with unvarying results.

During a conversation with Doctor O. W. Owen, late Professor of Physiology in the Detroit Medical College, the writer was pleased to learn that the former also had been engaged in experiments of like nature, and had obtained precisely parallel results. On one occasion, accepting the statement of the alkalinity of the intestinal and duodenal fluids, he endeavored to demonstrate the same by means of a vivisection before his class, when, to his surprise, an acid instead of an alkaline condition was revealed. Conceiving this to be an error, the result of accident perhaps—that possibly the knife which opened the duodenum and before had been employed to incise the stomach was at fault, or that possibly accidental pressure upon the stomach might have forced a portion of the gastric juice into the bowel immediately contiguous—he placed another dog upon the table, and with a new and perfectly clean instrument opened the abdomen from below upward, in order to avoid any possible passage of fluid from the stomach, then segregated the duodenum just below the pyloric orifice by means of a ligature, and then incised. The result was as before, distinctly acid, a condition which persisted throughout the intestine until the lower rectum was reached, where, owing to the existence of special glands peculiar to canines, an alkaline condition was found to obtain—as it invariably does in dogs, but not in man.

Doctor Owen's experiment was repeated on many occasions; he also experimented regarding digestion on the lines above indicated, the results in each and every case being identical and confirmative, no amount of control in any way contravening.

As the researches of Doctor Owen and those of the writer extended into the hundreds, and in each instance, where possible, were carefully guarded by control, and the results unvarying, there can be little doubt as to the correctness thereof, and of the conclusions: that the normal secretion of the intestine in mammals (in *Carnivoræ* and *Omnivoræ*, at least), including that of the duodenum, is acid; that duodenal digestion is an acid and not an alkaline function; also that the accepted views regarding the utility of pancreatin are based upon false premises resulting from imperfect knowledge and experimentation.

It may here be said that, while making an exhaustive and careful scrutiny of modern literature relating to the subject of duodenal digestion, and discovering that no definite evidence had ever been offered as to the alkalinity of the intestinal tract, aside from mere supposition, it was also found that in one instance Claude Bernard had made extensive investigations in this direction and given utterance to the belief that the intestinal tract was invariably acid throughout its length. Therefore, neither Doctor Owen nor the writer can claim an absolute discovery; but the researches made must be of value as reaffirmation of a fact that has been forgotten or escaped notice.

G. ARCHIE STOCKWELL.

DO CAP AND SHOE FIT?

In the May 25th issue, under the caption "A Fallacy in Palatable Therapeutics" (page 308), THE MEDICAL AGE had occasion to refer to a preparation of cascara sagrada as follows:

And in this connection we cannot help noting a fact that recently came to our knowledge regarding a certain preparation put out by a firm of pseudo-nostrum makers, and for which its proprietors claimed unexampled virtues. An examination revealed the mysterious fact that the amount of extractive in the preparation was in the proportion of fifty-five against not to exceed *twenty-eight* obtainable from the drug itself. This can mean but one thing, viz., *sophistication* to the detriment of both the prescriber and patient.

This editorial was solely in the interests of

physicians, and intended to put them on their guard regarding sophistication; and as the editor had no desire to enter upon a controversy, or to give the manufacturers of this product free advertising, all names or reference that would identify the product were suppressed.

Within a few days, however, we have been shown the advertising sheet put out by Frederick Stearns & Co., and a journal ostensibly pharmaceutical in import formerly published in Detroit, but now of New York, in both of which this concern takes it for granted it is the only firm of pseudo-nostrum manufacturers in existence, and the only house putting out a sophisticated cascara. Consequently an attack is made upon the house of Parke, Davis & Co., who it is alleged control the columns of THE MEDICAL AGE.

Regarding the latter proposition it may be said that the columns of THE MEDICAL AGE are controlled exclusively by its editor, and that for all material appearing in the literary departments the editor is solely responsible. As to the first proposition, viz., that Frederick Stearns & Co. are the only pseudo-nostrum manufacturers in existence, and the only firm exploiting sophisticated cascara: it may be added that this concern has self-fitted both the cap and the shoe, and is heartily welcome to the same—it may be judged by the utterances of its own manager, and not by anything said by THE MEDICAL AGE.

EDITORIAL NOTES.

Calculus and Syphilis.—

In China it is very rare to meet with calculus in a syphilitic patient. So few are the cases that the question has arisen whether the two maladies may not be antagonistic. Calculus is not uncommon in men who have had gonorrhœa, since it is often lodged in the urethra behind a stricture, and the contraction of the canal is sometimes an obstacle to litholapaxy.

It may be of interest to investigate the influence of syphilitic poison on the formation of accretions of uric acid and its compounds, and such an investigation may possibly lead to definite results regarding prophylaxis.

Beginning of Cancer.—

In the *Lancet* (London) Doctor Robert Boyce calls attention to the relationships apparently existing between irritation and cancer. The initial and pre-malignant stage of cancer is often due to some local irritant, and is entirely too much neglected; especially is this true with reference to lingual irritation from defective teeth, which induces simple psoriasis that too often ends in cancer. It is suggested also that certain animal parasites by their long-irritating presence may arouse pre-cancerous and even cancerous changes—such as coccidia, distoma, bilharzia, and the echinococcus.

Mental Projection of Images.—

Nikola Tesla, the Hungarian electrician, has suggested that since images are recognized in the brain through the medium of the retina and the optic nerve, it may be possible for the brain to evolve an image upon the retina by a sort of reflex action when the mental picture is formed in the mind. The further suggestion is made that possibly some means may at some time be obtained by which this image upon the retina may be recognized, thus perfecting a process by which true mind-reading may be effected.

Normal Liquid Hyoscyamus.—

This preparation is most valuable in the sleeplessness and restlessness of childhood and old age—is especially valuable for nursing infants, but must be given in very small doses frequently repeated. Valuable also in the wakefulness accompanying fevers; in low fevers with mild delirium; in great mental excitement, or hallucinations; and as a sedative to mucous tissue of the respiratory tract.

American Academy of Medicine.—

The nineteenth annual meeting of this organization will be held at Jefferson, N. H., August 29th and 30th. The greater part of the time is to be devoted to the discussion of certain problems of the "Relations of the Medical Profession to the Dependent Classes." Any information desired may be obtained from the Secretary, Doctor Charles McIntire, of Easton, Pa.

Items and News.

A Severe Case.—

Two weeks ago I was summoned to the bedside of Djoahnne Sdtleometzhler. Examination convinced me he was the victim of typhomalariopneumophthisicotrychinotetanoataxionephrecticosplenitis. Owing to the ubiquity of pathogenic bacilli, antiseptics are always indicated, so I exhibited calcium betanaphtholalphamonosulphonate. As the patient suffered from severe non-localized pain, I ordered orthoöxyethylana-monobenzoylamidoquinoline, combined with salicylaldehydmethylphenylhydrazine. For insomnia I gave trichloraldehydphenyldimethylpyrazolene.

Upon examining him the next evening, I became convinced the vital forces had misconstrued the remedies and that a congeries of retroabsorptions had resulted. I then wrote out the following:

℞ Tetrahydrobetanaphtholamine,
Sodium thioparatoluidinesulphonate,
Orthosulphamidobenzoic anhydride,
Amidoacetoparaphenetidine, ää ʒ j.

M. Sig.: A tablespoonful every hour.

The patient is up and about, but something is wrong with his Broca's convolution—he mutters in a multi-syllabic lingo that is intelligible only to modern pharmacal chemists. I am in hiding where the spiral melody of the woodbine that twineth blendeth ever with the sweet, low, soothing, murmurous quadrisyllabic, rhythmic rune of the gentle polygonum punctatum.—DOCTOR COOPER, in *Medical Gleaner*.

Experiments in Freezing Alcohol.—

The success attending Professor Dewar's experiments in the freezing of absolute alcohol has a peculiar interest, in view of the fact that 200° C. was the utmost limit of cold reached or obtained by man, viz.: by the use of liquid oxygen. Professor Dewar allowed some liquid ethylen to flow through a brass tube surrounded by solid carbonic acid and ether, and, when this cooled, it was passed into a large test-tube, in the middle of which was placed a glass tube with a flattened bulb at the end, the bulb being full of absolute alcohol. The evaporation of the ethylen was then accelerated by the use of the air-pump, and the alcohol was frozen into a mass as clear and transparent as crystal. The tube containing it was turned bottom upward, and as it melted it assumed exactly the consistence of glycerin, flowing in a sluggish way down the sides of the tube. Ether requires less cold than alcohol to freeze it, and in several of Professor Dewar's experiments ether-ice formed on the sides of the glass vessels. Besides this, the warm air of the theatre was constantly condensing as snow or hoar frost on some of the vessels used in the experiments, and the chief difficulty of the occasion was the projecting of the experiments on the screen by the electric light, so that all present might see what was taking place.—*Scientific American.*

A Menace to Therapeutics.—

Is the germ theory of disease a vast joke at the expense of the profession? If so, has it not gone far enough? Shall we sit calmly by and see perpetuated the "greatest medical error of the day"? Ætiology has gone astray—let us endeavor to save therapeutics.

These thoughts are brought forcibly to mind by the presentation to the profession of a diphtheria antitoxine solution, manufactured by a German chemical house.

The materia medica of the Germans has always been notably deficient, and in their haste and anxiety to keep abreast of the American manufacturing chemist, whose great work has done so much to elevate therapeutics, they appear to have recklessly abandoned common sense and reason.

The medical press and many branches of the science have been corrupted, almost unconsciously, by foreign influence; but when therapeutics, the most practical, the most important branch of medicine, is threatened, it is time for American physicians to call a halt. Whither are we going? Germs, cellular therapy, attenuated virus, animal extracts, antitoxine solutions, anarchy, chaos!—*Medical Brief.*

Conservatism and Progress.—

The two great races in the world's future will be the Anglo-Saxon and the Chinese. They will not displace each other, but will effectually dominate all others. This will seem to many a rash prediction, but look at the facts:

We are a colonizing people—so are the Chinese.—Certain superstitions relating to the burial of their dead hinder the full development of their facility in this direction, but the facility exists manifestly. Overcoming all barriers, they begin to be found in all parts of the world, and where they go they stay. They send home the bodies of the dead, but the vacant places are filled by the living. In spite of restriction laws, increasingly severe, Chinatown, in San Francisco, instead of reducing, extends its limits year by year.

We colonize *as* Anglo-Saxons—going to

Australia not to become Australians, to South Africa not to become Africans, but everywhere to be Anglo-Saxons still. So do the Chinese. This is part of our complaint against them, that even in the very heart of Anglo-Saxondom they are still and inflexibly Chinese.—DOCTOR W. C. POND, in *The Spirit of Missions.*

An Old Advertisement.—

The following curious advertisement of the well known Martin Van Butchell appeared in the *Morning Herald* for May 27th, 1789:

Fistula in Ano.
No Cure no Pay.
The teazing local Disease commonly called a Fistula in Ano, is radically cured, (sometimes in one week, always in two), without cutting, dressing, medicine, cautery, injection, risk, confinement, loss of blood, or an atom [of] sound parts;
By Martin Van Butchell,
(many years a diligent pupil, to John Hunter, Esq., F.R.S.,
Formerly of Jermyn-street; now of Leicester-Square, Surgeon extraordinary to the King;
But many more to his late Brother, Doctor William Hunter, F.R.S.,
Next door to the Chimney-sweeper, in Windmill-street;
Physician Extraordinary to the Queen,
And Anatomical Lecturer to the Royal Academy.)
At his house, No. 56 Mount Street, Grosvenor-square;
From Ten o'Clock till Two.

—*British Medical Journal.*

Abuse of the Bandage.—

The first abuse of the bandage comes through clumsy, unskilled application by the inexperienced, hasty, or careless. The second, through too firm adjustment, when the circulation is impeded or totally strangulated, the tissues beyond becoming asphyxiated, mortified, and destroyed—this latter occurs most commonly in cases of fracture; five or six such cases have come under my observation in which the bandage got in its deadly work, though frequently entered in hospital records as "acute mortification." A fractured limb which is at all firmly bandaged should be closely watched for the first twenty hours, until, in fact, the subsidence of primary inflammation and swelling and the bandage relaxes its grip. It often becomes a matter of great difficulty to permanently adjust widely separated fragments without risking a firm bandage to fix them. These difficulties and dangers could be largely obviated if we would go back to the practice of our fathers, and, after carefully adjusting the fracture, leave it alone and not permanently "set" until primary swelling has subsided.—DOCTOR T. H. MANLEY, in *Medical Summary.*

Walking.—

Stride out to your full measure, but don't try to go beyond it; and try not to fall short of it as you go on. Keep the knees as straight as you can conveniently, and this will oblige you to rise on the ball of the foot behind, at each step. The calf of the leg is a valuable element in walking, and yet many walkers, by throwing their weight upon the knees and the muscles of the front of the upper leg, lose the push and spring of the calf altogether. Such men habitually stand with knees bent, like a "sprung" horse, and only straighten the knees by an effort. The arms should swing freely, the head should be up, and the chest expanded; breathe deep and breathe slow. Few people walk right; yet it is an easy thing to learn, and when it is learnt you can walk farther, faster and more enjoyingly than if you do it wrong.—*Lippincott's Magazine.*

Medical Fees.—

A French physician sued a notary, whose wife he had treated, to recover an honorarium of 1,500 francs. The lawyer, who had already tendered 700 francs, pleaded that this sum was sufficient. Having heard the advocates on both sides, the civil tribunal delivered judgment, basing its decision on the following grounds: "As in a question of medical fees the points to be regarded are the pecuniary situation of the patient and the repute which the physician may have acquired through his labors and his discoveries; and considering in the present case the position of the patient's husband and the medical eminence of the physician, the sum demanded is not excessive; the tribunal accordingly condemns the attorney to pay the fee of 1,500 francs in full."—*Medical News.*

Two Distinguished Physicians.—

Two living German princes have distinguished themselves by becoming practicing physicians: Duke Karl Theodor, of the royal house of Bavaria, having completed a course of study, has made a specialty of eye diseases as they occur among the poor, and in April 1893 successfully performed his two thousandth operation for cataract. Prince Louis Ferdinand, his cousin, besides being engaged in practice, works in the laboratory, and has recently made the ætiology and pathology of pleurisy objects of special clinical and bacteriological studies. He has lately published a monograph concerning twenty-three patients suffering from pleuritis who came under his observation.—*Popular Science Monthly.*

To the Ladies—For the Complexion.—

Wash your own dishes, polish your own brass and silver, sweep and dust, make your own bed, water and tend your own flowers—in fact, keep yourself busy and in good spirits; take a brisk walk or ride every afternoon in fine weather. Eat eggs, milk, beefsteak, and honest home-made bread, avoiding anything fried, or that is rich in condiments or fats. Sleep eight hours out of the twenty-four in a large, well ventilated room in which the sun is permitted to shine several hours each day. —*Exchange.*

Death from Cocaine.—

A death from cocaine has just occurred in a dentist's chair in Goshen, Ind. The patient, a man of fifty years of age, was to have two teeth extracted. Ten minims of a nearly eleven-per-cent. solution were injected in the gums, and the patient died in a few minutes after the teeth were extracted. The toxic dose of cocaine in this case was, therefore, about one and one-twelfth grains.—*Atlanta Medical Journal.*

Vaccination Evidence.—

The German army, where vaccination and revaccination are compulsory, and which numbered a million men during the war with France in 1870, lost only 286 men with smallpox, while the French army lost several thousand by that disease.

Equine Beef.—

Horse flesh has been sold in Paris since 1866, and in 1893 over 20,000 horses and mules were consigned to the *abattoirs.* Old horse flesh is said to be more tender than that of young ones.

Doctor Emory Lanphear.—

This gentleman is now owner of the *St. Louis Clinique,* which henceforth will be conducted in the interest of the College of Physicians and Surgeons of St. Louis.

Opium-Smokers in New York.—

There are about ten thousand opium-smokers in New York, according to the testimony of one of the witnesses before the Lexow Committee.—*Exchange.*

Worth Remembering.—

When in old persons you find gangrene following a slight injury, the urine should be examined for sugar, as it generally means diabetes mellitus.—TUHOLSKE.

Book Reviews.

INEBRIETY AND NARCOMANIA. By Norman Kerr, M.D., F.L.S. Cloth; 8vo; pp. 780. Price, 1 guinea. H. K. Lewis, London.

This work is now in its third edition, revised and enlarged, and devoted to the classification, ætiology, pathology, treatment and jurisprudence of narcomania. It is fully a scientific treatise devoid of any connection with ultra-reformers or the teetotal movement, and the more valuable in that it fills a place in medical literature hitherto unoccupied, save, perhaps, in a feeble and desultory way; it is entirely free from hobbies, uncalled-for sentiment, or partisan bias.

Forty-two pages are devoted to "Inebriety as a Disease;" eighty-seven to "Forms of Inebriety; one hundred and thirty-nine to "Ætiology;" thirty-one to "Prescribing of Spirits by Physicians;" thirty-seven to "Pathology;" one hundred and five to "Treatment," and the balance to "Medico-Legal Aspects," "Appendix," and a thorough and comprehensive index.

An idea of the difficulties surrounding the preparation of the work cannot be better given than by quoting from the second paragraph devoted to pathology:

> Purely nervous disturbance, altered states of nervous fluid, and impairment of the nutrition process with changed conditions of the blood, may take place in the living subject without exhibiting any physical degradation of structure visible during life. Insanity of an incurable type may be existent beyond dispute, and yet we may be able to detect no organic or other lesion. How often in such cases has the curable stage been passed without an effort at remedial treatment, because the presence of disease was unsuspected! Even after death, in many cases of mental unsoundness, an examination has revealed no definite discernible lesion.

Perusal of Doctor Kerr's book cannot fail to lead to more scientific consideration of the subject of alcoholism, and to the securing of more appropriate means looking to the relief of a disease frightfully prevalent in the United States, one that entails misery and suffering not only upon the individuals, but upon their families and friends. First of all, however, is needed strict and honest governmental supervision of the manufacture and sale of alcoholic liquors—a supervision which, unlike any that has hitherto prevailed, will guarantee absolute purity. At present the sole standard is specific gravity, which is inadequate to the detection of certain adulterations — and notoriously all American liquors, distilled and fermented, those derived from maize particularly, are over-

burdened with products that render them quintuply toxic to the nervous system.

MACROBIOTIC, OR OUR DISEASES AND OUR REMEDIES. By Julius Hensel. Cloth; 8vo; pp. 201. Price, $1.50 net. Boericke & Tafel, Philadelphia.

The author ascribes the origin of internal disease to diminished electric force, the cause of this diminution to be found either in respiration of oxygen insufficient in itself, or in the more difficult absorption of the quantity of oxygen required for the prosecution of vital function owing to a diminished number of red corpuscles, or very strong emotion of the mind, or in atmospheric influences, or in a reduction of nervous tension in special regions of the body owing to a partial check in the circulation of the blood.

The foregoing is practically an outline of the work, which certainly is most interesting, and while we cannot coincide *in toto* with the views of Herr Hensel, there is much that offers food for thought, much that also tends to throw light upon certain problems of pathology which have heretofore been but partly understood.

Herr Hensel is a physiological chemist, but evidently is lacking in many of the finer principles of pathology. The work, however, is exceedingly well written and something of a novelty to Americans from the fact that the type occupies the greater portion of the page, leaving but very narrow margins—an example that might well be imitated by a goodly number of our own publishers who seem to be fairly prodigal in the expenditure of paper.

One objectionable feature of the book is a constant tendency to puff the author's own tonic, which is stated to be merely a preparation of iron and lime protoxide combined with formic and acetic acids.

THE GRAPHIC HISTORY OF THE FAIR. Imperial quarto; pp. 240; cloth. Price, $4.00. The Graphic Company, Chicago.

Everybody desires a history of this memorable Exposition. With facilities unsurpassed, the publishers have spared neither labor or expense in producing a work of superlative merit. The volume opens with an introductory chapter on previous World's Expositions, followed by a brief survey of the preliminary organization, with the resulting legislation and other events culminating in the creation of the marvelous White City. Then follow chapters on the various departments of the Fair, describing each in detail, with over thirteen hundred illustrations, picturing everything of beauty, utility, and interest.

The great merit of this history is due to the exceptional advantages accruing from the service of the *Graphic* staff of artists and engravers extending over the entire Exposition period, aided by the special photograph privilege accorded by the Director General whereby was obtained access to the entire collection of the official photographer, and also from the coöperation of the chiefs of departments and foreign commissioners.

This volume is not only the first notable history of the Exposition issued complete, but it will challenge in attractiveness any other at several times the price. There is issued an edition in half-morocco, and also one in full morocco, at an advance of one and two dollars respectively in price. There is also a limited edition *de luxe* at $10. The size of the volume is 11 by 16 inches.

THE UNKNOWN LIFE OF CHRIST. By Nicholas Notovitch. Paper; pp. 191. Price, 25 cents. Rand, McNally & Co., Chicago.

Nicholas Notovitch, who, as his name indicates, is a Muscovite, in 1877–78 undertook a series of journeyings through the Orient, and while in the "Vale of Kashmir" learned of the existence of very ancient memoirs pertaining to the life of Saint Issa (Jesus Christ) in the archives of Lhassa and in a few of the larger monasteries of Thibet. At Himis, a large Buddhistic monastery near Leh, the capital of Ladak (Little Thibet), he was fortunate enough to secure a view of one of these memoirs, and, with the aid of an interpreter who translated from the Thibetan tongue, the verses as read by a Lama were carefully transcribed. The Russian production of the author is made available to Anglo-Saxon readers through a French edition translated by Alexina Lorenger. Beside the unknown life of Christ, which is exceedingly interesting, the volume contains an account of the travels of the discoverer, the privations and perils encountered, and a critical *résumé* of the chief subject matter.

THE ATLANTIC MONTHLY. Price, 35 cents; $4.00 a year. Houghton, Mifflin & Co., Boston.

"August Birds in Cape Breton," by Frank Bolles, in the August number, completes the series of papers by this author. Other articles are: "Philip and His Wife," chapters XXIII–XXV, by Margaret Deland; "The Girlhood of an Autocrat," the story of the famous Empress Catherine of Russia, by Susan Coolidge; "The College Graduate and Public Life," by Theodore Roosevelt; "Some Evils

of Our Consular Service," by Albert H. Washburn; "Cardinal Lavigerie's Work in North Africa," by William Sharp; "Professional Horsemen," by H. C. Merwin; "Letters of Sidney Lanier," chapter II, by W. R. Thayer; "Moosilauke," by Edna Dean Proctor; "Church Communion Tokens," by Alice M. Earle; "A Fair Exchange," by A. M. Ewell; "Love and Art," by Ellen Olney Kirk; "Voices from Afar," by Edith M. Thomas; "Marie von Ebner-Eschenbach;" "A Dumas of the Hour;" "Marcella and Pembroke;" "Comment on New Books;" "The Contributors' Club."

LITTELL'S LIVING AGE. Price, $8.00 a year. Littell & Co., Boston.

The following are a few only of the many interesting and valuable papers which have appeared in its July ('94) issues: "Lord Wolseley's Marlborough," by Archibald Alison, G.C.B.; "The Proposed Nile Reservoir," by J. P. Mahaffy and Frank Dillon; "In the River Pei-ho," by William Laird Clowes; "The Queen and Lord Palmerston," by Reginald B. Brett; "The Problem of Constantinople," by Frederick Harrison; "Marlborough," by Andrew Lang; "A French Ambassador at the Court of Catherine II.," by Mrs. d'Arcy Collyer; "Some Great Churches of France," by Walter Pater; "Handel: Man and Musician," by Frederick J. Crowest; "The Art of Dying," by I. A. Taylor. Fiction is well represented by an installment in each number of an interesting serial translated from the French, "The Dean of Killerine," and by some short stories. Each issue also contains a page of choice poetry.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 a year. Charles Scribner's Sons, New York.

The August issue is a "Fiction Number," and contains six complete short stories: "French for a Fortnight," by H. C. Bunner; "An Undiscovered Murder," by T. R. Sullivan; "The Missing Evidence in the People vs. Dangerking," by William Henry Shelton; "Awaiting Judgment," by W. Graily Hewitt; "The End of Books," by Octave Uzanne; "She and Journalism," by Harrison Robertson. There is another installment of George W. Cable's serial story, "John March, Southerner," Chapters XLVIII–LIII. Other papers are: "Newport," by W. C. Brownell; "Lowell's Letters to Poe," edited by George E. Woodberry; "The People that We Serve"—sketches of American types—by Octave Thanet; "The Point of View"—Domestic Service—Degrees of Common Sense—The Talk in Novels. The number contains only one poem, "A Ballad of Crossing the Brook," by C. G. D. Roberts.

OUR ANIMAL FRIENDS. Volume Twenty. Cloth; quarto; pp. 384. Price, $1.50. The Society for the Prevention of Cruelty to Animals, New York.

This represents the issue for one year of that most excellent periodical, *Our Animal Friends*, the title of which is sufficiently indicative of its scope and purpose. It is equally interesting for either children or adults. The aim is a high one, the literary matter most excellent. The illustrations are object lessons in natural history which are ably supplemented by descriptive text, and there is hardly one in the book that is not worthy of being framed and hung upon the wall.

We should be very glad to see the circulation of this most excellent little magazine, the price of which is but $1.00 a year, so increased that one copy would go into every household in Canada and the United States.

THE EXPOSITION FLYER. Published by the Lake Shore and Michigan Southern Railway Co.

So marked was the advancement in the art of transport in the operation of the twenty-hour trains between Chicago and New York over the Lake Shore and Michigan Southern Railway, during the World's Fair, that the above was thought worthy of reproduction. Consequently the Company has published a very handsome water-color picture of this train, taken from an instantaneous photograph. In connection therewith also is given a representation of one of the first trains ever run over the road, which is placed in the upper right-hand corner as a foil to that of the great Flyer.

A copy of this picture will be sent to any portion of the United States on receipt of ten cents in silver, by A. J. Smith, G. P. & T. A., Cleveland, Ohio.

THE OVERLAND MONTHLY. Price, 25 cents; $3.00 a year. Overland Publishing Company, San Francisco.

The August number contains: "Kaala, the Flower of Lanai," by E. Ellsworth Carey; "A Breath of Heaven," by Emma M. Newton; "The Maid of Mexico," by Lee Fairchild; "Two City Girls' Experiences in Holding Down a Claim," by L. E. M. Smith;

"Among the Experiment Stations," by C. H. Shinn; "Saunders' Social Yank," by Duane Morley; "The Panglima Muda," chapters v–viii, by Rounseville Wildman; "An Apology," by Francis E. Sheldon; "Building a State in Apache Land," chapter ii, by Charles D. Poston; "L'Envoi," by Alice Evans Stone; "Among the Belmont Hills," by Clarence Urmy; "Egyptian Superstitions," by Hadji Raphael; Book Reviews.

THE COSMOPOLITAN. Price, 15 cents; $1.50 a year. Cosmopolitan Publishing Co., New York.

The contents of the July number are: "Beauty," by M. E .W. Sherwood; "Training a Butterfly," by Mrs. P. M. Goulèe; "An Unconquered People," by Elizabeth T. Spring; "Some Rare Napoleonic Medals," by J. Howe Adams; "Antarctica," by A. W. Greely; "Raking Straws," by Julien Gordon; "Louis Kossuth," by Madam Adam; "The Origin of Thought," by Armando P. Valdés; "The Selling and Giving of Dinners," by W. D. Howells; "The Den of the Grey Wolf," by C. G. D. Roberts; "Ruth Herrick's Assignment," by Elizabeth G. Jordan; "First and Last," a poem, by Florence E. Coates; "In the World of Art and Letters;" "The Progress of Science."

DOUBLE CONSCIOUSNESS. By Alfred Binet. Paper; 16mo; pp. 93. Price, 15 cents. Open Court Publishing Co., Chicago.

This little brochure deals with "Experimental Psychology in France;" "Proof of Double Consciousness in Hysterical Individuals;" "The Relations Between the Two Consciences of Hysterical Individuals;" "The Hysterical Eye;" "Mechanism of Subconsciousness;" "The Graphic Method and the Doubling of Consciousness;" "The Intensity of Subconscious States;" "The Rôle of Suggestion in Phenomena of Double Consciousness;" "Double Consciousness in Health."

INDIANLAND AND WONDERLAND. By Olin D. Wheeler. Paper; 8vo; pp. 108. Charles Lee, G. P. & T. A. Northern Pacific Railway, St. Paul.

This beautifully illustrated pamphlet is gotten up by the Northern Pacific Railway in order to give tourists some idea of the scenery along its line. It is handsomely illustrated with some scores of views which are themselves a treat. By sending to the general passenger agent of the Northern Pacific Railway, this volume, which is of interest throughout, may be obtained.

Therapeutic Brevities.

Chloral in Rigidity of the Cervix.—Rigidity of the cervix is present only when there exists one of two conditions, namely: muscular spasm, or cicatricial or other lesion of the part. When the latter is present it generally produces the muscular spasm also to a greater or less degree. Rigidity from either one of these causes produces the most excruciating suffering, and this in itself calls for palliative treatment. For this there is one remedy from which I have experienced the most satisfactory results—Chloral hydrate. It not only lessens the intense pain by acting as a cerebral sedative, but it removes the cause by relaxing the muscular fibres involved as well as by actually softening the indurated mass, even to cicatricial tissue.

Its effect goes even beyond this. It seems to act as an oxytocic, but whether directly or indirectly cannot yet be said; nevertheless, in inertia of the uterus, the pains will be seen to grow stronger and more regular after the administration of several doses. The indications for Chloral are: The indurated cervix, usually thickened, with the os about the size of a five- or ten-cent piece, without increase in size for one hour or so, the pains with their intensity fixed—as the patient expresses it—"at the lower part of the stomach," with much tenderness at this point during digital examination. Of course it can be given best to strong, robust women, usually the kind so affected.

The dose is one-half to one scruple. Begin with the former, every one, two, or three hours, according to the effect produced. Benefit will usually begin after the second dose. I have given as high as four scruples during labor without any injurious effects noticed; but would advise beginning with a small dose, ten or fifteen grains, and to watch the result. Before using it, attention should be given to the condition of the heart and respiratory organs, especially the former, as it has been known to affect that organ quickly. I believe it is perfectly safe unless the physician is careless.—*Medical Progress.*

Treatment of Erysipelas.—During twenty years I recall only a single case which did not yield to the hypodermatic use of Carbolic Acid. The formula employed is:

℞ Carbolic acid, 1 fluidrachm.
Glycerin, 3 fluidrachms.
Distilled water, 4 fluidrachms.

Inject hypodermatically one syringeful, in each portion the size of a hand, daily.

It will be observed that this is a twelve-

and-a-half-per-cent. solution, and only in a few cases has any local irritation resulted.

When the thickened and hardened condition of the skin renders it difficult to introduce the needle, I select points on the border of the dermatitis to make the injection so as to reach the areolar tissue beneath the skin; there is little pain connected with it. I am convinced that most cases of erysipelas will yield to this treatment, and it does not preclude resort to any constitutional means which may be indicated.

The best results may be obtained by, at the outset, giving calomel followed by Epsom salts in senna tea to procure free catharsis. After purgatives I give twenty-five minims of muriate tincture of iron every three hours until an ounce is taken.

But when I am called early to the case and find the erysipelatous inflammation circumscribed, I rely upon the hypodermatic use of the Carbolic Acid, and rarely have any occasion to resort to other means of relief.—Doctor J. McFadden Gaston, in *Medical and Surgical Reporter.*

Passiflora Incarnata.—I can fully endorse all that has been said regarding Passiflora in the convulsions of infants and children. Three hours after its birth I was called to see the infant of Mrs. B——, the nurse informing me the child had not been free from convulsions more than five minutes during two hours. I put fifteen drops of tincture of Passiflora in one-half glass of water, and gave the infant one-half teaspoonful as soon as the convulsions ended. I left directions to have the dose repeated after every convulsion. A messenger was to let me know in one hour how the baby was—but no messenger came. At the end of the second hour I drove around to see if the baby was dead, and found him sleeping soundly, and one would never have suspected what that little fellow had endured. The next day convulsions returned. The child received another dose, and from that day to this it has not received a drop of medicine and has not needed any; it is at this writing a large, strong baby. I have used Passion flower many times in the past few years, and always with the best results.—Doctor C. E. House, in *Homœopathic Recorder.*

Potassii et Sodii Tartras.—Experience has taught that Rochelle salt has great power to antagonize the inflammatory process. Given early in all cases of wounds, injuries and surgical operations, in small doses frequently repeated, it has a direct and positive power to prevent the development of inflammation. As a rule, it should never be given beyond a moderate laxative effect upon the bowels. I have seen it do great good by its inherent power to oppose the inflammatory process. Now it should be used as a most valuable adjunct to the proper local antiseptic treatment.

It is one of the best remedies a woman can take for a few days before confinement, to put her bowels in good condition for the event. It is almost impossible for a woman to have a bad time whose bowels have been in a relaxed condition for a few days before delivery. Many women have been allowed to suffer intensely, because they were not properly instructed respecting this matter. Thorough relaxation of the whole system is what every woman needs in the great ordeal.—Doctor D. J. Parsons, in *Medical Brief.*

Sweet Clover.—Mellilotus officinalis grows along the roadsides extensively. It is a mild nerve sedative with apparent selective affinity for the central nervous system.—It appears to regulate the nervous function of different organs. It corrects palpitation if from reflex origin, restores menstruation, overcomes nervous dysmenorrhœa, and soothes the excitability of hysteria. It has been advised for epilepsy, but it must be studied farther ere any definite decision on this line can be arrived at. It certainly soothes mental excitement and will be found advantageous in the delirium of fevers and in acute or incipient mania. Also it relieves cerebral congestion to a certain extent, and is thus of considerable value in the headaches accompanying this condition. In fact, it does well in all forms of headache except those arising from chronic anæmia.

It will, moreover, be found to soothe the nervousness of infants, especially if derived from reflex causes, and such often occur. In threatened spasms it can be relied upon, and will be found of great service during dentition.—*Medical Standard.*

Bromide-of-Potassium Poisoning.—In the *Quarterly Journal of Inebriety*, Doctor Greenless recently published several cases of poisoning from this source. One was in an epileptic who took seventy-five grains daily for three weeks, when stupor, coma, extreme prostration, and death followed; the post-mortem showed intense congestion of the meninges. In another epileptic the same amount was given, and in a few days coma and death followed; here both the brain and

meninges were congested, and the kidneys in the advanced stage of cirrhosis. The other cases were less prominent but clearly due to bromism. In some cases of inebriety large doses of bromide produced stupor and prostration, from which recovery was slow and followed by continued prostration.

It is an error to suppose bromides are harmless. In certain cases they are capable of causing very serious results, and should be used only for a short time in large doses. There is yet much to learn regarding this very much used and abused drug.

Sugar as an Oxytocic.—Recently in the obstetrical and gynæcological clinic of Genoa, Italy, Professors Mosso, Peoletti and Bossi reported results obtained by sugar as an oxytocic. In ten out of eleven cases a positive ecbolic result was obtained from an ounce of sugar in eight ounces of water half an hour after administration. In some cases one dose was sufficient to induce expulsion of the fœtus, and if a second dose was given after two hours the effect was most pronounced. In no cases were tetanic symptoms observed, but on the contrary the contractions were regular; no incarceration of placenta was observed. These gentlemen accordingly insist they are justified in recommending sugar in solution as a substitute for ergot, since such is "prompt in action and unattended with any of the disadvantages of the usual ecbolic." Moreover, sugar is non-poisonous and the dose may be increased and repeated *ad libitum* without fear of injury to either mother or child.

Opium and the Aged.—Doctor F. W. Campbell related the case of an old lady, subject to attacks of pleurodynia, for which he was in the habit of prescribing minute doses of Opium. Seized with severe pain, she called a neighboring practitioner, who gave her a hypodermatic injection of morphia, when she went to sleep so profoundly that her friends were alarmed. Next day she was found to be suffering from complete paralysis of the bronchial tubes, and phlegm went on accumulating until she died shortly afterwards. Relief of pain is not the only object to be considered when suddenly called to see a case. A hypodermatic needle may be a two-edged sword, especially when used on the aged.—*Canada Medical Record.*

Epididymitis.—The application of a blister along the course of the cord, or even on the inner aspect of the thigh, will frequently abort a beginning epididymitis.

On a piece of adhesive plaster (two by four inches), thickly spread Cantharidal Cerate to within a quarter of an inch of its margin, allowing this free surface for adhesion to the skin, thus preventing shifting of the blister. Before applying, the skin should be prepared by being thoroughly washed with warm soapsuds, dried by rubbing with a coarse towel sufficiently hard to produce redness, and finally dampened with vinegar. Should vesication be delayed, its appearance may be hastened and the pain relieved by hot fomentations.—*Medical Press.*

Ragwort.—In general action *Senecio Jacobæa* and *S. aureus* seem to be allied to pulsatilla. Doctor H. S. Purdon, of Belfast, informs me Senecio is an old Irish remedy for jaundice, and that both he and his father have often prescribed it in that condition. It occurs to me that possibly the color of the flowers may have something to do with its selection originally for this purpose.

There is, I think, very little doubt that we have in Senecio and its preparations a drug which deserves to rank with permanganate of potassium and binoxide of manganese in its power of stimulating the menstrual flow.—Doctor Wm. Murrell, in *Medical Press and Circular.*

Elecampane.—This is one of the most valuable of modern antiseptic remedies, one that, aside from its powerful effect, has the great advantage of being free from odor. It is aromatic, stimulant, expectorant, emmenagogue, diaphoretic, and tonic to mucous membrane. It has been found of especial use in malaria, tuberculosis, catarrhal diseases, whooping-cough, and chronic bronchitis. To illustrate its powerful antiseptic effect it may be mentioned that one grain of the inulin added to 10,000 of urine will prevent the latter from decomposition. With this evidence it would seem as if it would prove a true bactericide in wasting diseases.

Bhuphali.—This is a plant native to India, and botanically known as *Corchoris fasiculatus.* It is heralded as a valuable remedy in certain forms of bronchial inflammation because it increases secretion from mucous surfaces; its soothing and healing influences also render it especially valuable in diseases of the alimentary and urinary tracts. In bronchitis it relieves pain and quickly controls the short, hacking cough. When taken in infusion it is an active diuretic, and resembles very much the balsams and terebinthinates.

All parts of the plant, except the flowers and leaves, may be used.—*Indian Medical Gazette.*

Phytolacca.—Phytolacca has been used as a blood remedy and for rheumatism, and seems to have some influence over this disease. Its power over the blood is limited. It has been used for diphtheria, but has no remedial effect in the grave form. In mastitis, where the breast is hard and painful, this remedy locally applied and taken internally acts like a charm. Also in painful menses, with rheumatism, Phytolacca will be found to act very promptly.—*Georgia Eclectic.*

Stinging Nettle.—Doctor Thomas Hill, of Goldsborough, N. C., recommends *Urtica urens*, or "Stinging Nettle," as a remedy in profuse uterine hæmorrhage. Doctors Kent and Poole, of the North Carolina Medical Society, corroborate, and the latter declared he had successfully employed in apoplexy the fluid extract prepared by Parke, Davis & Co. given in doses of eight drops, gradually increasing to fifteen, three times daily.

Hydrastis Canadensis.—This is a tonic remedy especially applicable in general weakness of the muscular structure—it influences the tone of the muscular fibre, causing a tendency to chronic contractility. It will overcome any tendency to development of superfluous muscular fibre and abnormal growth. It is unexcelled as a tonic to mucous surfaces, restoring them to normal functional activity.—*Medical Summary.*

Value of Milk Sugar.—Sugar of Milk is often an efficient agent in regulating the bowels of infants. If there is tendency to diarrhœa, a few grains will answer every purpose; or if there is constipation, it may be combined with a little soda and sufficient action usually obtained. It is much preferable for general use in the nursery to castor-oil and laudanum.—*Kansas Medical Journal.*

Another Remedy for Rhus Poisoning.—Doctor S. B. Stealey, in the *Times and Register*, recommends as an application a strong tea made from the leaves of the Chestnut, this to be repeated every three or four hours As a rule, he claims, the cases are relieved in twenty-four hours, though those of longer standing may require more time. The application relieves the itching and heat at once.

Medical Progress.

Local Treatment of Chronic Salpingo-Ovaritis. — Recently Doctor Auvard devised a simple and successful method for the treatment of these cases. After having cleansed the vagina thoroughly, a bivalve speculum is introduced, and 20 to 30 grammes of glycerin, to which a pinch of powdered boric acid has been added, are poured in. Cotton tampons are then placed in the Douglas pouch and in each of the lateral *culs-de-sac.* Three or more of these tampons are necessary to distend and press upon the canal on all sides. These are left in place for two or three days at most, when they are withdrawn and others substituted for them. If there is a troublesome odor of fermentation on their withdrawal, especially in case of an abundant leucorrhœa, iodoform may be added to the glycerin unless it happens to be repulsive to the patient.

This form of treatment seems to act like an emollient bath, and as a kind of internal automatic massage through permanent vaginal distention. From its first application the patient experiences a decided relief, which is afterward increased. The pains become less and less, and the thickening of the roof of the vagina diminishes rapidly and may entirely disappear. The pus in the tubes is emptied; and the prolapsed ovaries lose their painful sensibility, decrease in volume, and finally become imperceptible to the touch. Besides, the uterus, which was fixed by the tumefaction of its appendages, recovers its normal mobility. These results, which may be considered as a more or less perfect cure, have sometimes been obtained in cases that were supposed to be serious enough to demand operative interference.—*La Semaine Médicale.*

Patulous Ductus Botalli.—The patient was a man of twenty-four years, and the diagnosis made *during life.* The heart dullness was increased to the right and left, and at the apex a systolic murmur could be heard. Over the aortic cartilage the first sound was loud; the second sound moderate, accompanied by a faint murmur. Over the pulmonary artery the first and second sounds were clear and loud, and a prolonged whistling murmur, diastolic in sound; the greatest intensity of this murmur was at the second right intercostal space, and but slightly transmitted, except to the back in the left interscapular space, where it could be well heard. The patient was well until twelve years old, at which time symptoms of heart-disease de-

veloped. The sound was over the region of the pulmonary artery, and, as aneurysm could be excluded, the diagnosis of open ductus botalli was made. The man died of acute endocarditis. Autopsy proved why the sound was diastolic and not systolic: There was an unusually wide duct up to the aorta, but at this point there was a marked stenosis. The blood was thrown into this duct by systole, but the pressure being higher in the aorta over the opening than in the pulmonary artery the blood could not enter the former. During diastole the blood in the pathological channel lost its pressure, and gradually flowed through the narrow opening from the aorta into the dilated duct. Only twenty similar cases have been reported.—*Deutsches Archiv für Klinische Medicin.*

SEXUAL DEBILITY.—Cases of sexual debility which are marked by imperfect erections and by premature emissions are usually, if not entirely, due to hyperæsthesia of some portion of the urethra. Masturbation has very little, if anything, to do with it, beyond the fact that if indulged in to excess it may induce a tendency to hyperæsthetic condition, but this is no more marked in masturbators than it is in those persons who indulge to excess in the venereal act.

Organic stricture has little, if anything, to do with debility; but stricture associated with this hyperæsthetic condition induces an irritable condition of the canal which produces spasmodic contractions of the urethra upon attempts to pass instruments, oftentimes during the first act of micturition afterwards, and at the time of connection.

Varicocele plays no unimportant part in these cases.

Neuralgia of the testis, if a cause of debility, induces it merely as a secondary consequence to the pain which is one of the distinguishing features of this disease.

Tuberculosis, syphilis, and gonorrhœa may also play a part, and should all be reckoned with in summing up the causes which may induce this peculiar and depressing condition of affairs.—DOCTOR F. R. STURGIS, in *Gaillard's Medical Journal.*

MISPLACED TESTICLE RESTORED.—Doctor Edward Martin has had a case of misplaced testicle in a boy aged nine years. The gland had normally descended on the left side, but that on the right had gone into the perineum, lying an inch in front of the anus; it was freely movable and normal in size. The difficulty was that from its false position the gland was exposed to traumatism, and in fact the patient had already suffered one attack of acute orchitis.

Cutting down upon the testicle, the cord was dissected free, some dense fibrous bands passing backward toward the anus and being adherent to the epididymis were cut, an opening was made in the tissue of the scrotum, and the gland secured in its proper position by two stitches passing through the lower part of the tunica vaginalis and the inner skin surface of the base of the scrotum. The wound was united in a cross direction, thus deepening the scrotal sac, and healed without suppuration, and now the testicles lie in a perfectly normal position.

Later the boy rode a bicycle without discomfort.—*Times and Register.*

MENSTRUATION AND OVULATION.—Leopold and Mironoff conclude that menstruation is usually accompanied by ovulation, although the former not rarely occurs without the latter. The hæmorrhage depends upon the presence of the ovaries and an adequate degree of development of the uterine mucosa, and not upon the maturation and rupture of ovisacs. Ovulation occurs, as a rule, at the same time as menstruation, and the process requires an increased afflux of blood to the generative organs for several days, resulting in the formation of a typical corpus luteum. Ovulation may also occur independently of menstruation, though but rarely under physiological conditions. At times ovulation, with the formation of a typical corpus luteum, is replaced by an afflux of blood to an ovisac that has not matured and does not undergo rupture, resulting in the formation of an atypical corpus luteum. Normal ovisacs may be present at a time when the ovaries are undergoing senile contraction, and they may undergo physiological rupture and form typical corpora lutea.—*Medical and Surgical Reporter* (Philadelphia).

DISEASES OF HEART MUSCLE IN TYPHOID FEVER, SCARLATINA, AND DIPHTHERIA.—In typhoid fever the highest grades of parenchymatous degeneration of the heart muscle are present by the end of the second week, and then disappear but slowly in the later weeks. Interstitial myocarditis begins mostly at the end of the second week. In scarlet fever interstitial myocarditis begins mostly on the fourth day, and becomes excessive in the middle of the second week. In diphtheria this degeneration begins somewhat later, at the seventh or ninth day, and is at its highest

development at the end of the second or beginning of the third week. The characteristic fatty degeneration of diphtheria begins often very late. The symptoms during fever are irregularity and smallness of the pulse, and dilatation,—the best sign of dilatation is the gallop rhythm. A very slow pulse is a bad prognostic sign in diphtheria. Dilatation is an important physical sign. The amount of urine is usually diminished, and there is slight albuminuria with or without hyaline casts.—ROMBERG, in *Deutsches Archiv für Klinische Medicin.*

PHYSICAL DIAGNOSIS OF GALL-STONE COLIC.—In the beginning, even before pain, a palpable tumor in the region of the gall-bladder, which disappears as the stone passes into the intestine; the walls of the gall-bladder fall quickly together, and a slight rubbing together of its walls can be felt—the attack ends with this sign, though the pain does not always end; sometimes a diastolic, rubbing sound, heard in the region of the gall-bladder, which disappears with the ending of the attack. After a prolonged attack a friction remains in the region of the gall-bladder which can be felt, but can be better heard with a stethoscope. During the course of a severe attack the liver increases in size, and can be felt below the margin of the ribs. One can exclude gall-stones when no stone is found in the fæces, when there is no friction in the region of the gall-bladder, and finally, when the gall-bladder itself is not increased in size.—DOCTOR GERHARDT, in *Deutsche Medicinische Wochenschrift.*

THE ESSENTIAL OILS AS BACTERICIDES.—The essential oils were held in high esteem by the ancients, but lately seem to have been forgotten in the multitude of new discoveries. The power of many of them to destroy bacteria has, however, been demonstrated anew by M. Chamberland, M. Cadéac, and M. Mennier, and M. Blaizot and M. Caldagnes have found in them bactericidal powers even greater than they had been supposed to possess. The essences found by these gentlemen to be most active are those of Cinnamon, Lavender, Marjoram, Cloves, Geranium, Vervain, and Tuberose. The simple exposure of their vapors is sufficient to destroy in an hour such microbes as those of pus and cholera, and six minutes' exposure effects a manifest attenuation of their activity.—*Popular Science Monthly.*

PIN WORMS AS A CAUSE OF PERNICIOUS ANÆMIA.—Under the title of Progressive Pernicious Anæmia has been described a disease of rapid course, which is especially observed in women lately confined, and characterized by all the signs of anæmia with dyspepsia, diarrhœa, vomiting, œdema, and hæmorrhage. Karvonen narrates a case of this malady in a girl sixteen years of age who had suffered from ascarides for two years. The attack began with vomiting, and she soon exhibited general debility, complaining of noises in the ears, headaches, chills, œdema of the feet, etc., being bedridden. The exhibition of santonin was followed by the expulsion of the parasites, when other measures were taken to prevent further irritation. The result was complete relief.—*La France Médical.*

THE PLACENTA AND METALLIC SALTS.—Porak states that arsenic, copper, lead, atropine and phosphorus pass through the placenta, while mercury and alizarin do not. Copper and mercury accumulate in the placenta, while lead is not found there. Poisons are accumulated and become diffused in the fœtus more rapidly than in the mother. This shows that certain abortions are due to the action of these poisons upon the placental circulation or to the effect of the health of the mother upon that of the child. It also explains the mortality of the fœtus by the accumulation of the toxic substance in the placenta, and in the central nervous system. —*Medical Standard.*

TYPHOID FEVER AND SEWER GAS.—In Doctor Alessi's experiments the rats, rabbits and guinea-pigs used, when exposed to the inhalations of sewer gas, became so predisposed to infection that a small dose of an almost harmless cultivation of typhoid germs killed them. The animals not so exposed rallied from the same, and even far larger, doses. Long-continued exposure to sewer gas was apparently much less dangerous than a short exposure; they evidently became used to the gas, so that the effect was less pronounced.—*Popular Science News.*

EFFECT OF RHUBARB ON THE URINE.—According to Jung, if the urine of a healthy person who has been taking rhubarb be tested with bismuth, the same brown coloration will be produced as if sugar were present. Inquiry should be therefore made respecting the use of the first-named drug, in cases where it might otherwise lead to a wrong diagnosis.—*Druggists Circular.*

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Original Articles.

PERNICIOUS FEVER.*

BY DR. JOAO VINCENTE TORRES HOMEM.†

(*Continued from page 458.*)

XII. In the *neuralgic* form of pernicious fever, very frequent in Rio de Janeiro, are observed external neuralgias or visceralgias, which constitute the perniciousness of the attacks. Among the former the most commonly noticed are: neuralgia of the fifth pair (facial), left intercostal, crural, sciatic, and temporo-occipital; among the latter the chief are gastralgia, hepatalgia, splenalgia, enteralgia, ovaralgia, and hysteralgia. The same occurs with the neuralgias accompanying pernicious paroxysms as with other phenomena characterizing perniciousness: they either exist together with fever or are entirely apyretic (masked fevers); sometimes they disappear completely when the paroxysms terminate, sometimes merely lessen in intensity, to recur later with extreme violence.

Left intercostal neuralgia is at times accompanied by severe palpitations of the heart, pallor of the face, oppression and dyspnœa, simulating an attack of angina pectoris; when this group of symptoms is observed, the pernicious paroxysm is termed *cardialgic.*

Occipito-temporal neuralgia is at times attended by giddiness, ringing in the ears, and photophobia. Gastralgia may be accompanied by vomiting, hepatalgia by jaundice, and ovaralgia and hysteralgia by hysteriform convulsions.

Case 18.—F——, merchant, forty-five years of age, Portuguese; went to Porto das Caixas on business, was there ten days, and on returning to the city felt only fatigue and loss of appetite. Two days after his return, on a Sunday morning, he felt indisposed after breakfast, vomited all he had eaten, and about noon was attacked by a facial neuralgia, attended by fever. He took of his own accord some homœopathic doses of tincture of nux vomica and tincture of aconite. At 9 P.M. the intensity of the neuralgic pain and fever, as well as the oppression and uneasiness he suffered, obliged him to call a physician (of Hahnemann's school).

The next day the patient's condition was so delicate that his family decided to call in consultation the Councillor Felix Martins, Doctor Paula Costa, and myself. We found him with countenance red and flushed, right eye much injected, lachrymating and very sensitive to light, intense pain over the whole right side of face, forehead, and skull. Pulse full and frequent; skin hot and dry. Tongue covered with a thick coat of white fur, tending to dryness at tip; insatiable thirst, constant nausea, and at times vomiting. Great sensitiveness of epigastrium and right hypochondrium; liver much enlarged, spleen a little increased in size, bowels constipated; urine scanty and high-colored. Agitation; insomnia; from time to time some delirium, which turns on business affairs. Respiration accelerated, at times suspirous; no physical signs on percussion and auscultation of the heart and lungs.

Ordered twelve leeches to verge of anus; emetic mixture of ipecac and antimony; mixture of two grammes of sulphate of quinine, after operation of emetic; veratrine ointment to right side of face and body; a purgative enema containing assafœtida.

On the following day I found him much better. The face was less red, less painful, and the right eye less injected and weeping; pulse less full and frequent; temperature of skin less elevated; tongue less furred and moister; epigastrium painless on pressure; liver smaller. The nervous symptoms were of less intensity; patient slept quietly for three hours. Respiration less accelerated. The emetic caused profuse vomiting and four stools; the quinine mixture, given in spoonful doses every hour, had been repeated at 8 P.M.

*A clinical study of the fevers of Rio de Janeiro—translated by Surgeon George P. Bradley, United States Navy, and read before the Association of Military Surgeons of the United States, session of 1894.

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The patient at the hour of my visit had taken three grammes of the sulphate of quinine. Ordered the same mixture in spoonful doses, every two hours; currant shrub as beverage; a purgative enema containing assafœtida; same ointment for face.

Improvement progressed gradually, and the dose of bisulphate of quinine was daily lessened. Ten days after the consultation Senhor F—— was convalescent, and went later to Tijuca, whence he returned perfectly recovered.

Case 19.—Entered the hospital of Nossa Senhora D'Ajuda in February, 1874, a mulatto slave, thirty-odd years old, weak and anæmic, who complained of intense pain in præcordial region, accompanied by oppression and dyspnœa. The interne of the establishment, although very talented and well informed, when he examined him at 8 A.M. believed it to be a case of commencing pleurisy, and ordered four wet cups to be applied to the seat of pain. Two hours after, on my visit to the ward, I found the patient in the following state: Sitting up in bed, since the horizontal decubitus caused him great uneasiness; extremities cold; axillary temperature 100.8° F.; pulse frequent and small; acute pain in præcordial region, exacerbated by pressure, percussion, and movements of respiration. No physical signs furnished by auscultation and percussion; no cough; great dyspnœa. Tongue slightly furred; great thirst; anorexia. Liver and spleen normal; bowels constipated; urine scanty but normal.

Although the patient assured me that his disease dated from the night before, and that until then he enjoyed good health, I diagnosed a pernicious attack of cardialgic form, said that the prognosis was very grave, and ordered him two grammes of sulphate of quinine in two doses, as well as a diffusible stimulant mixture into which entered tincture of musk, ether, valerian and opium; to the seat of pain application was made of compresses steeped in a concentrated solution of cyanide of potassium. All was in vain; at 3 P.M. the patient died, having become completely algid an hour before.

Case 20.—A boy of nine years, residing in the Rua da Conceiçao, very lymphatic and feeble, after taking a long walk in March, 1875, on an excessively hot day, complained later of a pain in the right thigh, which did not allow him to walk with freedom. At 9 P.M. he had fever, and so remained till the following day, when he was seen by the family physician, who only prescribed a diaphoretic mixture and a fomentation of camphor and opium. Later the pain of the thigh increased greatly in intensity, the fever was exacerbated, and delirium set in. At 8 the next morning I saw the patient in consultation. He had already taken six decigrammes of sulphate of quinine; he was delirious and presented some convulsive movements in the left arm and muscles of the left side of the face; he had high fever and a pulse of extraordinary frequency. The liver was congested and the belly tympanitic. A purgative and antispasmodic enema, twelve decigrammes of sulphate of quinine in two doses to be taken in small enemata after the operation of the former, blisters to the calves of the legs, repeated frictions to the spine, axillæ and groins with ninety grammes of aromatic vinegar holding in solution eight grammes of sulphate of quinine, were the remedial means I advised and which were agreed to by the attending physician. At one o'clock in the afternoon the boy died.

Case 21.—Paulo Valdez, Spaniard, forty years old, clerk in a cigar factory in the Rua dos Ourives, very thin and pale, entered the Santa Izabel ward on the 12th of May, 1861. Has had intermittent fever at various times, and three years ago was taken with severe hæmoptysis, for which he was treated in the same ward. Is suffering from gonorrhœa a month old, for which various injections have been used. On the day of his entering the hospital, at noon, he had a severe chill, followed by intense pain in the epigastrium, vomiting, and later, fever. His suffering increasing in the afternoon, he decided to go to the hospital at 7 P.M., having requested to be treated by the distinguished professor and councillor, Doctor Valladao (Baron de Petropolis). The physician on duty prescribed for him a mixture containing laudanum, tincture of chamomile, and tincture of nux vomica.

Condition on the 13th: Face pale; general emaciation; evident signs of impoverished nutrition; pulse 98; temperature of skin a little above normal; tongue much coated; vomiting from time to time, especially on swallowing a large amount of water; very intense thirst; pain in epigastrium, lessened by pressure with a pillow, and at times exacerbated, extorting cries from the patient; liver a little enlarged; spleen normal; evacuations natural; belly retracted; urine free from albumen. Cough frequent at night—mucopurulent expectoration, little dyspnœa; dullness on percussion of infra-clavicular region, and supra- and infra-scapular region of right side; thoracic resonance of other parts of same side diminished; normal resonance all over left side; very frequent subcrepitant râles and bronchophony in right infra-clavicu-

lar region; gurgling in the points corresponding to the space limited by the internal border of upper third of right scapula and vertebral canal of same side; subcrepitant râles in supra-spinous fossa; very rough friction-sound at lower angle of scapula and in axillary region; puerile respiration in left lung. Heart normal.

Ordered: Powdered ipecac, three decigrammes every half-hour until four doses were taken; six decigrammes of quinine sulphate to follow emesis by ipecac; a wineglassful every two hours of infusion of cinchona and musk, 360 grammes mixed with thirty grammes of syrup of tolu.

The patient only vomited twice; he took the quinine at 1 P.M.; two hours later was seized by a chill, and the epigastric pain became extraordinarily violent, obliging him to roll on the floor of the ward. At six o'clock he had hiccoughs and was algid, and at 9 P. M. he died.

Autopsy (twelve hours after death): Nothing noteworthy in cranial cavity. Strong adhesions of right lung with pleura, especially in posterior aspect; tubercles in different stages of development occupy the whole of the upper lobe of the right lung; two cavities in top of same lobe, one the size of a pigeon's egg, the other of a small nut; the lower lobe of the same lung is compact, hardened, and slightly crepitant. In the left lung are noted some tuberculous granulations scattered through upper lobe; in the lower portion of this lobe a tuberculous nodule the size of an almond, composed of a hollow friable mass which, when divided with the handle of a scalpel, opens a regular cavity with smooth homogeneous walls. Dilatation of right ventricle of heart, with thickening of its walls; two indurated plaques in horizontal portion of arch of aorta. Stomach containing bile and mucus, vessels somewhat injected. Liver enlarged, congested, of a dark red color. Spleen of normal size, but its parenchyma very friable. Nothing appreciable in intestines, kidneys, and bladder.

The history of the disease of Valdez, the course it followed, its unexpected termination, the unusual violence of the gastralgia, and the absence of anatomical lesions which could explain his speedy death, left not the least doubt that it was a case of gastralgic pernicious fever. The eminent practitioner who took charge of the patient was of this opinion, although he had some tendency to believe, at the commencement, in the existence of tubercular peritonitis in process of evolution. In the absence of any important symptoms of this affection, he had recourse to the sulphate of quinine, giving thus one more proof of his prudence and high professional standard. In connection with this case the Baron de Petropolis mentioned to the students several cases of gastralgic pernicious attacks observed by him, making in regard to the diagnosis of this affection some remarks of great practical value.

Case 22.—José, black slave, kneader of bread, residing in the Rua D. Manuel, fifty years old (supposed), entered the Santa Izabel ward on the 31st May, 1874, at 6 A.M. Is addicted to alcohol, and has suffered from buboes. On the night of the 30th was attacked by a pain in the hepatic region, at first not severe, but which became later so violent as to force him to groan and cry out from midnight to the time he was brought to the hospital. The interne ordered applied to the seat of pain a flaxseed poultice very hot and well sprinkled with laudanum, which produced some immediate relief but of short duration.

Face distorted, expressive of great pain; patient lies on his belly in bed, bending a little to the right; profuse cold and clammy sweat bathing entire surface. Very acute pain in hepatic region, starting from centre of this region and extending forward to epigastrium and behind to back, increased by pressure and percussion, as also by respiratory movements and cough. Pulse 92; axillary temperature 37.2° (99° F.); tongue large, moist, and rose-colored. Vomiting. The size of liver cannot be well ascertained, as the patient will not allow suitable examination of right hypochondrium; no jaundice; spleen normal; bowels swollen and constipated; urine clear and lessened in amount. Bellows murmur in sternal region; percussion sound at point corresponding to right border of second piece of sternum; first cardiac sound not distinctly heard at left nipple. Respiratory system sound.

Ordered a purgative enema; likewise:

℞ Valerianate of quinine, 2 grammes.
Extract of hyoscyamus, 30 centigrammes.
Extract stramonium, } āā 20 centigrammes.
Extract of opium, }

Divide into twelve pills. One every two hours.

℞ Essential oil of turpentine,
Oil of hyoscyamus,
Tincture of opium, } āā 30 grammes.
Chloroform,

Use to foment hepatic region every three hours.

Contrary to the expectation of all, the patient died a little after noon, having barely

had time to take two of the pills and use the fomentation twice.

Autopsy (twenty-one hours after death): In the cranial cavity the only lesion noted is atheromatous degeneration of the basilar artery. Extensive patches of atheroma in ascending aorta, horizontal portion of arch, and descending aorta; dilatation of this vessel to extent of four centimeters from origin of innominate; fatty degeneration of heart—induration of sigmoid, aortic, and mitral valves; lungs normal; stomach and intestines normal; liver enlarged, presenting various discolorations on its external surface, at some points a dark green color, at others light yellow, deep red or mahogany red. On cutting the parenchyma of the liver, a great flow of blood is observed; the surfaces of the section present the same variety of color as the external surface; a great part of the right lobe undergoing fatty degeneration. Spleen normal; kidneys fatty.

I presume that I am not deceived in considering this case an example of hepatalgic pernicious fever. Simple hepatalgia, though causing the patient great suffering, does not have the duration of pain here experienced, and does not terminate fatally in little over twelve hours. Might the liver have been selected for the local seat of perniciousness because it was already suffering from chronic lesions due to alcoholism? It is very probable—the more so as this is observed in a great majority of cases in every other organ suffering from a chronic disease, when a pernicious paroxysm bursts forth.

XIII. The *pneumonic* form of pernicious fever is very frequent with us. At times the inflammation invades the more central parts of the parenchyma of the lung, without the pleura being attacked; again, there is a true pleuro-pneumonia observed, with severe stitch in the side and other symptoms of the disease when primary and idiopathic. In this latter case it is very rare for the diagnosis to be well established until the further progress of the affection clears it up.

During the paroxysm, which is always accompanied by high fever, the lung becomes extensively congested. In the beginning—that is, for a few hours after the initial chill—the lesion does not pass the congestive stage, and auscultation reveals merely great weakening of the respiratory murmur at some points of the lung, crepitant or subcrepitant râles at others. If the attack is of short duration, the stage of pulmonary hepatization is not developed; upon remission, the parenchyma of the organ reacquires wholly or in part its physiological permeability, until a fresh paroxysm makes it again impermeable. But when the attack is very prolonged, or when the type of fever is sub-continued or even remittent, the hyperæmia of the lung is followed by extra-vascular exudation, the exudate hardens, and the pulmonary zone in which this phenomenon occurs becomes hepatized; auscultation reveals the existence of bronchial respiration, and percussion of the wall of the chest at the points corresponding to the lesion shows complete loss of resonance. Under the appropriate treatment generally used in pneumonia, the hepatization begins to disappear, but as soon as the fever recurs, and the paroxysm returns, either the same pulmonary region that was becoming permeable becomes again hepatized as it was before, or other portions are affected, the pneumonia extending in surface and depth.

In pneumonic pernicious fever, dyspnœa is always very marked, and is not in proportion to the extent of the pulmonary lesion; the cough is often dry and infrequent, and when there is expectoration the sputa remain bloody for several days.

The course of the fever in a case of pneumonic pernicious fever is very different from that observed in a simple essential pneumonia, and this is doubtless the best source of differential diagnosis for the physician.

In inflammation of the lung the temperature rises rapidly, attains a high degree, reaches its apogee in the short space of some hours, and here remains for several days, with slight oscillations of three- to five-tenths of a degree (Centigrade) less in the morning and more in the evening; from the fourth to the eighth day of the disease—with us usually on the fifth day—the temperature falls rapidly, reaches the physiological limit or even some tenths of a degree below it, and there occurs what modern physicians term defervescence. At the same time the febrile heat ceases, the local resolution of the pneumonia commences, the exudates begin to break down, the liquefaction being denoted by subcrepitant râles (return-râles) which replace, little by little, the bronchial respiration; ex-

pectoration becomes more easy and profuse; the urine increases in amount and becomes very rich in urates, phosphates, and alkaline chlorides.

In pneumonic pernicious fever the febrile heat follows the evolution of the paroxysms, sometimes assuming the frankly intermittent type, sometimes the remittent, with a difference of one or two degrees (Centigrade) between the morning and evening temperatures. As to the local lesion, it either remains the same in spite of the cessation or sensible diminution of the fever (which is very rare, and even, so to speak, never observed, in idiopathic pneumonia); or it decreases sensibly while the febrile reaction persists with slight remissions—and then we must seek another explanation for this fever; or it begins to be resolved as the paroxysm declines, and recrudesces when another paroxysm develops—and we know that simple pulmonary inflammation never takes this course. Thus the anomalies in the progress of the temperature, the want of harmony between the fever and the local condition of the lung, are very important circumstances in the diagnosis of pneumonic pernicious fever. The value of these two signs is evident in the two following cases:

Case 23.—Joâo Paulo Dias, Portuguese, tailor, thirty-two years old, residing in Pedregulho, entered the Santa Izabel ward on the 15th June, 1872, at 6 P.M. Never suffered from intermittent fever, but had yellow fever with black vomit in March, 1860, two months after coming to Brazil. Is very subject to catarrh of respiratory organs, and whenever he takes cold remains hoarse for several days.

On the 14th, in returning to his house at 8 P.M. it rained and he wet his feet. On the 15th had a severe chill, attacked by stitch in right side and some cough. Later on had high fever, the pain in side became more intense, and he spat some blood. He was brought to the hospital in a carriage, and the physician on duty prescribed a mixture containing ten centigrammes of tartar emetic and sixteen grammes of acetate of ammonia.

Condition on the 16th: General condition satisfactory, nothing in external appearance indicating impoverished nutrition. Axillary temperature 38.8° (101.8° F.); pulse 90. Intense pain in right side of thorax, two centimeters below and behind nipple, exacerbated by respiration and especially by cough; some dyspnœa (28 respirations per minute); frequent dry cough; one tenacious and bloody sputum noticed in spit-cup.

It was recognized by percussion that the resonance of chest-wall was diminished in lower third of right side, especially in anterior and lateral aspects. Auscultation revealed existence of friction-sound in axillary region to its anterior limits, crepitant râles four centimeters below nipple, and subcrepitant râles from lower third of scapula downwards; absence of bronchial respiration and bronchophony; some exaggeration of vocal resonance at points where there is dullness. Nothing abnormal observed on left side. Tongue much furred; loss of appetite; thirst. Bowels constipated; liver and spleen of normal size; urine scanty and high-colored.

Ordered five wet cups to anterior and lateral surfaces of right side of chest, lower third; infusion of ipecac containing ten centigrammes of tartar emetic.

At 5 P.M. the interne found patient much relieved from pain, but with more dyspnœa (32 respirations per minute), temperature 40.2° (104.4° F.), and pulse 120. (Physical signs on auscultation and percussion of chest not mentioned in case-paper.)

June 17th. Great dyspnœa (38 respirations per minute); cough very frequent and dry; pain in side but slightly intense. Dullness on percussion of lower third of right side of chest, in all three aspects; increased vocal vibration at these points; friction-sound; bronchial respiration and bronchophony very marked. Nothing abnormal in left side. Temperature 39.5° (103.1° F.); pulse 108. Tongue still much furred. Liver a little enlarged. The patient felt great relief after application of cups; the emetic mixture produced copious vomiting and three large evacuations.

Ordered five more wet cups to right side of chest; also:

℞ Nitre, 4 grammes.
Acetate of ammonia, 16 grammes.
Syrup of tolu, 30 grammes.
Infusion of polygala, 360 grammes.

A wineglassful every two hours.

At 5 P.M. the interne found the patient with a temperature of 40.6° (105.2° F.), pulse 112, respiration much accelerated (38), and some delirium. He ordered him a mixture containing two grammes of tincture of digitalis and eight grammes of laurel-water.

June 18th. Temperature 40.2° (104.4° F.); pulse 108. Tubular respiration all over right lateral aspect of chest, posterior aspect to lower angle of scapula, and in front beneath the nipple; also bronchophony at these points, and percussion-sound completely dull. On the left side is noted puerile respiration in

upper two-thirds, and subcrepitant râles in lower third. Cough rare, no expectoration; 38 respirations per minute; entire cessation of pleuritic pain. Tongue covered with yellow fur; loss of appetite, and great thirst. Liver enlarged and painful; spleen normal; urine scanty and bilious. No delirium, nor any symptom on the part of the nervous system.

Ordered: Calomel, one gramme in three doses, to be given one every two hours; sulphate of quinine, two grammes, in three doses, one to be taken in a glass of sulphuric lemonade every three hours, after purgative effect of calomel; a large blister to right side and back of thorax.

At 5 P.M. the interne found the patient in the same condition, with a temperature of 40.5° (105° F.), pulse 120, and respiration much accelerated (36). The blister had not yet burned, and the calomel had produced only one stool; first dose of quinine not yet given.

June 19th. Patient had six large evacuations during night. Took first dose of quinine at five o'clock in the morning, and the second at 8 A.M. (twelve decigrammes). Temperature 38.9° (102° F.); pulse 100. Patient groans with pain from dressing of blister an hour before, and does not allow proper exploration of chest. The ear applied very lightly to thoracic wall perceives distinctly the tubular sound. Cough more frequent and loose; sputa viscid, bloody, and yellowish. Tongue less furred. Liver smaller; urine bilious.

Ordered sixty centigrammes of sulphate of quinine now (9.30 A.M.) and sixty more at noon (2.60 grammes in seven hours); confection of marshmallow with eight grammes of bicarbonate of soda and twelve grammes of acetate of ammonia, sweetened with syrup of squill; two meat broths.

At 5 P.M. the interne found the patient bathed in profuse perspiration, with a temperature of 37.8° (100° F.), and pulse 82. The cough was frequent and loose, expectoration easy, and the sputa continued bloody. Thorax not examined for fear of exciting pain.

June 20th. Marked improvement. Complete apyrexia; temperature 37.2° (99° F.), and pulse 76. Respirations 24. Cough loose; sputa yellowish, abundant, and some of them bloody. Percussion cannot be made on account of pain due to blister. Auscultation reveals the existence of great numbers of subcrepitant râles mingled with tubular respiration, especially in axillary region, bronchophony and bronchial cough. Tongue cleaner; some appetite; liver less enlarged. Patient had three evacuations. Urine more abundant and heavily loaded.

Ordered sixty centigrammes of sulphate of quinine now (9 A.M.) and same dose at noon; same alkaline drink; three meat broths.

At 5 P.M. temperature 37.2° (99° F.), pulse 68.

June 21st. Progressive improvement. Temperature 37.2° (99° F.); pulse 64. Deafness of cinchonism—sensation in ears as of a distant waterfall. Cough very loose; expectoration easy; sputa yellowish, and some slightly tinged with blood. Still dullness on percussion of lower two-thirds of entire posterior aspect of right side of chest, and of lateral aspect. Bronchial respiration heard only at line of lower angle of scapula and axilla; in rest of lung very coarse subcrepitant râles. Tongue large, moist, and rose-colored. Appetite. Two evacuations in twenty-four hours. Liver almost normal; urine abundant and less turbid.

Ordered one gramme sulphate of quinine in 120 grammes good Port wine, half a glass to be taken every two hours; blister dressed with cerate; soup, broth, coffee.

On the 23d the use of sulphate of quinine was suspended; the tubular sound had completely disappeared, and the subcrepitant râles were replaced by coarse and infrequent mucous râles. The pulse remained slow till the 26th, due without doubt to the action of sulphate of quinine upon the circulatory system. The only medication employed up to the 5th of July was wine of cinchona, in the dose of 180 grammes daily. The patient was discharged that day perfectly recovered.

Case 24.—Felicissimo, mulatto slave, thirty-six years old, joiner, well built and robust, addicted to abuse of alcoholic drinks, entered the Santa Izabel ward on the 28th May, 1874, at 2 P.M.

On the 26th, after leaving the shop in which he worked (Rua de S. Pedro) he returned to his master's house (Rua Formosa) without feeling the least indisposed. He supped well at 9 P.M. and drank to excess. He rose unwell on the 27th, complaining of headache. His master, supposing he had been intoxicated the night before (as he was accustomed), chastised him with a stick and made him carry a dozen casks of water for the use of the household. On finishing this task, which Felicissimo performed with much effort, he felt a stitch in the left side of the chest and some chilliness. At 5 P.M. he had high fever, and, after coughing a little, spat blood. They gave him some cups of infusion of elder-flowers with tincture of aconite, and a foot-bath; but on the 28th, finding himself no better, he was seen by a physician, who pre-

scribed wet cups to the seat of pain and an antimonial mixture. This prescription was not filled, and the patient was sent to the hospital. The physician on duty had his colleague's orders carried out.

Condition on the 29th: Face very flushed, with a red spot on left malar region; eyes injected, weeping, very sensitive to light; very intense frontal headache. Axillary temperature 40.5° (105° F.); pulse 100, full and hard. Acute pain in left lateral aspect of thorax and lower border of axilla, exacerbated by cough and respiratory movements. Cough dry and frequent; two sputa almost wholly composed of blood noticed in spit-cup; dyspnœa, especially owing to stitch in side (26 respirations per minute). On percussion some diminution of resonance in lateral aspect of left side of thorax; friction-sound in axillary region, especially perceptible during cough, and the only symptom revealed by auscultation. Nothing abnormal in right lung. Tongue covered with white fur; anorexia and great thirst. Bowels doughy and constipated; liver enlarged; urine scanty and high-colored. The antimonial mixture has produced vomiting and some perspiration.

Ordered twelve leeches to anus; six wet cups to left side of thorax; calomel, one gramme (in three doses); castor oil, sixty grammes, two hours after last dose of calomel; sulphate of quinine, one gramme, to be taken after free purging.

At 5 P.M. the interne found the patient much relieved of the pleuritic pain, with a temperature of 39.2° (102.5° F.), and pulse 90. Had not yet taken the sulphate of quinine.

May 30th. Exacerbation of stitch; frequent cough; many sputa of frothy red blood; greater dyspnœa than the evening before (32 respirations per minute); friction-sound all over axillary region and in anterior part of left side of chest; fine subcrepitant râles at same points; more marked decrease of thoracic resonance. Temperature 40.5° (105° F.); pulse 108. Tongue less furred, but a little dry at tip Belly softer; liver still greatly congested. Urine same as last evening. The patient had six stools, and took the sulphate of quinine at 7 P.M.

Ordered mixture containing two grammes of sulphate of quinine and thirty grammes of diacodium syrup,* in three doses, at two hours' interval; six more wet cups to left side of chest; infusion of *Cipo chumbo*† with syrup of gum (Arabic) as beverage.

At 5 P.M. manifest improvement; pain very bearable; absence of bloody sputa; temperature 38.6° (101.5° F.); pulse 82. Stethoscopic signs about the same. The interne ordered the ptisan continued.

May 31st. Pleuritic pain hardly perceptible; two bloody sputa during morning; cough more infrequent; little dyspnœa (22 respirations per minute). Friction-sound very notable during inspiration; subcrepitant râles rarer and coarser; still diminution of resonance on percussion. Temperature 37.8° (100° F.); pulse 80. Tongue clean in great extent; belly soft; liver still enlarged; urine more abundant and less loaded.

Ordered blister to left side of chest, to be dressed with basilicon ointment; same mixture of sulphate of quinine; same ptisan as beverage; meat broth.

June 1st. The temperature of evening before noted in case-paper—37.4° (99.3° F.)—without further information; which indicates that patient did well during the day. At the visiting-hour he complained bitterly of the pain caused him by the dressing of the blister, made at 7 A.M., and which still torments him. Did not spit blood; has coughed but little. Will not allow the least exploration of left side of chest. Temperature 37.2° (99° F.); pulse 88. Tongue good; belly soft. One large evacuation in twenty-four hours. Liver little enlarged. Dysuria; patient presents signs of cantharidal cystitis.

Ordered mixture containing one gramme of sulphate of quinine; emollient confection containing four grammes of nitre; belladonna ointment to hypogastric region; two rice soups; stew.

June 2d. Functions of urinary system reestablished. Temperature the previous evening 37.2° (99° F.). The patient thinks himself well, and begs urgently for better diet. In the region of the chest occupied by the blister are still heard friction-sound and some mucous râles; little cough, expectoration rare, sputa mucous; respiration normal (20). Tongue large and moist. Appetite. Liver almost normal. Temperature 37.2° (99° F.); pulse 80.

Ordered forty-five centigrammes of quinine in 120 grammes of quinine wine; chicken stew; broth; coffee.

The use of quinine was suspended on the 3d; the patient continued to have better diet, and was discharged on the 10th perfectly well. A little friction sound was still heard in lower part of left axilla on deep inspiration.

In this case the diagnosis was established from the very first day the patient was examined. The intensity of the fever, the high degree of temperature in contrast with the

* A mild opiate preparation.

† *Cuscuta umbellifera*, or *C. racemosa* (Martius).

local symptoms (which at the outset hardly indicated a simple pleurisy), the congestion of the liver, and the initial course of the disease, concurred efficaciously to this end. In the patient of Case 23 it was impossible, for the first two days of the disease, to recognize that it was a pneumonic pernicious fever and not an essential pleuro-pneumonia. The unusual course of the morbid phenomena, especially of the febrile heat, the appearance of the bilious element, as well as the results obtained with the first doses of sulphate of quinine, cleared up the diagnosis very much.

XIV. When a person is predisposed to chronic ailments of the respiratory system, especially when he suffers from pulmonary tuberculosis, the pernicious fever which attacks him sometimes assumes the *hæmoptoic* form—reveals itself by profuse hæmoptyses which seriously compromise the patient's life and are reproduced with a certain regularity. In the intervals of the paroxysms are observed some sputa of blackish blood in greater or less amount, which attest the presence of coagula in the smaller bronchial ramifications. These coagula, irritating the parenchyma of the lung, excite nuclei of lobular pneumonia, the exudate of which easily passes into caseous degeneration; and thus is prepared a phthisicogenic process for the future.

The regularity with which the pulmonary hæmorrhage appears at certain hours of the day, and the inefficacy of the means usually of avail in cases not of pernicious fever, are elements of diagnosis which often guide us, besides others which apply to all grave forms of malarial infection, and which I shall take up minutely in the section devoted to diagnosis.

Case 25.—José Espinheiro, Portuguese, twenty-three years of age, clerk, of lymphatic temperament, pale and impoverished, residing in S. Francisco Xavier, entered the Santa Izabel ward, then in charge of the Baron de Petropolis, on the 8th August, 1864.

He is subject to bronchitis and laryngitis; coughs habitually, and has had more than once attacks of intermittent fever, which yield readily to sulphate of quinine. At 3 P.M. on the day of his entry he was seized with shivering, a sensation of severe constriction in the sternal region, and a few minutes after by a violent coughing-fit followed by a very profuse hæmoptysis. The physician on duty prescribed a mixture of nitre, ergotine and tannin, sinapisms to the lower extremities, and perfect rest.

Condition on the 9th: Face pallid, expression languid; general emaciation; clavicles and scapulæ very prominent. Apyrexia; pulse 76; heart normal. Cough, sputa composed of little clots of blackish blood; dyspnœa. Diminution of resonance in upper third of right lung, behind as well as in front; respiration harsh, and coarse subcrepitant râles at same points; sibilant râle in lower third. Respiration harsh at apex of left lung in front; mucous and sibilant râle at base and behind. Tongue good; anorexia. Abdominal viscera normal.

The eminent professor diagnosed pulmonary tuberculosis in first stage, of both lungs, and hæmorrhage in upper lobe of right; he ordered the same mixture continued, and applied a blister between the shoulders. At 4 P.M. the physician on duty was called to the patient's aid, who had again been attacked by a severe hæmoptysis. He replaced the mixture by another containing the perchloride of iron, and ordered dry cups applied to the anterior part of the chest. The interne two hours later found the patient febrile, which was mentioned in the case paper and reported the following morning to the Baron de Petropolis.

Aug. 10th. Apyrexia; pulse 78. Greater confluence of subcrepitant râles in right lung—these râles are perceived over a greater extent; sputa of blood very abundant; dyspnœa more marked, panic tenor, the patient believing himself irremediably lost. Tongue lightly coated; bowels constipated; liver and spleen normal; urine normal.

Ordered twelve decigrammes of quinine in 360 grammes sulphuric-acid lemonade, a wineglassful to be taken every two hours; a purgative enema of electuary of senna.

At 6 P.M. the interne carefully observed the patient, and only mentioned in the case-paper that the bloody sputa had become more numerous, the pulse more frequent (86), and the heat of skin greater.

Aug. 11th. Apyrexia; pulse 74; the pulmonary râles perceived over greater extent and less confluent. Patient says he is much better. From 6 A.M. to the visiting-hour (9 A.M.), spat blood only once; some dyspnœa. The purgative enema produced two large evacuations. Same treatment, except enema.

The patient took sulphate of quinine till the 14th, in decreasing doses. The hæmoptysis did not recur, and respiration continued improving.

On the 15th was prescribed an infusion of cinchona and musk with syrup of tolu, to be

taken in wineglassful doses during the day, a tablespoonful of cod-liver oil at breakfast and dinner, and restorative diet. This treatment continued till the 24th, when the patient demanded and received his discharge. Although in better condition, his general state was not yet satisfactory; percussion revealed no notable difference in thoracic resonance; auscultation disclosed great roughness of vesicular murmur at apex of both lungs, chiefly the right, where, besides being more marked, it was of greater extent.

Case 26.—A married lady, mother of two children, twenty-eight years of age, residing in the Rua do Areal, was attacked by hæmoptysis a month after having been treated by me for a bilious remittent fever which required large doses of sulphate of quinine. She consulted me in much terror, convinced that she was consumptive. I examined her with all care at 7 A.M.—the hæmorrhage had occurred at 10 the night before. I found her much disheartened, very pale, and still expelling some bloody sputa, but without fever. Some subcrepitant and sibilant râles in the left scapular region, and a little less resonance on this side, were the only morbid signs I perceived. The general condition was good. As the patient was subject to catarrh of the respiratory organs, and had lost a mother and aunt by pulmonary tuberculosis, I was inclined to believe that tubercular granulations existed in the apex of the left lung, particularly in the more internal parts of the organ, and that they had provoked the hæmorrhagic flow of the previous evening. Ordered four wet cups applied to the left shoulder, and a mixture containing one gramme of gallic acid and two grammes or ergotine, to be given in spoonful doses every two hours.

At 3 P.M. I was urgently summoned to see the patient, and learned that she had had a severe chill, followed by fever and a second pulmonary hæmorrhage, having lost less blood than the first time. I found her with high fever, pulse frequent and full, and very intense frontal headache. Auscultation revealed the existence of a greater amount of subcrepitant râles at the apex of the left lung, and percussion gave a less clear sound in the infraclavicular region. The patient spat blood frequently, in the form of reddish clots. I suspected that a pneumonia was developing, and therefore prescribed a mixture containing fifteen centigrammes of tartar emetic, and thirty grammes of diacodium syrup, and ordered a blister applied to the upper anterior surface of the left side of the chest.

Great was my surprise when the following day at 8 P.M. I found the patient entirely apyretic. This fact, and still more the whitened appearance of the tongue, as if it had been whitewashed, led me to prescribe twelve decigrammes of sulphate of quinine in two doses.

Later I found the patient without hæmoptysis and without fever, more flushed, and almost without cough. Auscultation showed a few subcrepitant râles in the left lung, and the resonance of the chest was perfect. There was much distaste for food, and constipation. I ordered a saline cathartic, and recommended that the two doses of quinine be repeated next day.

Improvement was progressive; still I gave quinine for three days more (one gramme, six decigrammes, and one-half gramme). The respiration became good; but there was still an unaccustomed degree of roughness in the vesicular murmur at the apex of the left lung, and the voice sounded hollow at this point. These signs, together with the hæmoptysis, as well as the patient's previous history, led me to advise her to retire to Theresopolis, where she remained six months, and whence she returned stout, strong, and healthy.

Perhaps some may deny this case to be one of hæmoptoic pernicious fever, and would explain the pulmonary hæmorrhage by tuberculosis, the existence of which seemed very probable. But considering that the hæmoptysis continued despite the use of wet cups to the chest and an astringent mixture; that it recurred attended by fever and headache, and preceded by a chill; that sixteen hours later all the febrile action had completely ceased, and the tongue preserved the appearance which generally with us attests the passage of a paroxysm of malarial fever; and that the patient did not lose a drop more of blood after taking the sulphate of quinine,—I believe that every experienced practitioner will agree with me. It is true that the circumstance of the presence of granular tubercles in the left lung concurred powerfully and immediately in the determination of the two hæmorrhages by the paroxysms to that organ, which is also indisputable as regards the patient in Case 25; but what seems beyond doubt is that in both instances the tuberculosis played the part of predisposing cause; without the direct influence of malarial miasm, betrayed in imperfect and insidious attacks, pneumorrhagia would not have appeared on that occasion.

XV. The *asthmatic* form of pernicious fever is little known to foreign pyretologists, to judge by the silence they observe in regard to it in their descriptions and divisions. With us it has passed unnoticed by some physicians, otherwise of great merit and enlightened experience. The extreme gravity of the paroxysm, which is almost always single and fatal, and the fact of its attacking only persons ordinarily subject to paroxysmal attacks of asthma—which leads to great difficulty in diagnosis—are the causes which explain such omissions. There are cases of asthmatic pernicious fever in which the paroxysm is accompanied by fever; but there are others in which the patient does not present the least febrile reaction, and it is then impossible to recognize the true nature of the disease before the fatal termination. The patient, adult or infant, offers to the eye of the practitioner the complete tableau of symptoms of asthma, exactly as they have been observed in former paroxysms. The means which have always produced relief become inert and fruitless; long before the usual period of termination of the attacks, the patient reaches the climax of asphyxia, becomes cyanotic, the extremities icy, the body drenched in perspiration, and death supervenes without any precursory symptom of whatever order announcing it. Thus died a celebrated Brazilian surgeon, whose glory was eclipsed by the tinsel of politics which dazzled him up to the brink of the grave. A few hours before his death he sought at an open window the air lacking to his lungs; he had recourse to a cigar, which he smoked a few minutes, for more than once he had thus lessened his suffering; he tried cigarettes of *Cannabis Indica;* all was in vain; instead of improving, he felt that the disease had reached a degree of intensity never attained during the forty years it had pursued him; he recognized that life was about to leave him, asked to be carried to bed, and a few moments after was a corpse.

Case 27.—A girl of twelve years, lymphatic and feeble, was subject to repeated asthmatic attacks from the age of four years. During the summer she had an attack every two months, which lasted eight or ten hours in its greatest intensity, and yielded gradually to an antispasmodic mixture. During the winter the paroxysms recurred at intervals of a fortnight, and sometimes of a week, of greater duration and severity. In July, 1874, this girl was attacked by intermittent fever. She had four simple paroxysms, which did not yield to sulphate of quinine. Her father took her to Cosme Velho, in the hope of curing her by change of locality; the afternoon she arrived there she was seized by asthma, without presenting febrile reaction; they gave her the same remedies they were accustomed to, but without the slightest benefit; at two o'clock the following morning she died.

XVI. The *rheumatic* form of pernicious fever simulates a case of cerebral rheumatism. There are, notwithstanding, very salient differences between the two diseases. In the former the cerebral symptoms develop at the same time as the articular; the joints become very painful, but are little swollen; many articulations are compromised simultaneously; the fever precedes by several days the appearance of the nervous and arthritic phenomena, is not accompanied by profuse perspiration; nor is there, in the course of the disease, the least vestige of inflammation or fluxion in the visceral serous membranes; the peculiar symptoms of meningitis are not observed; there is no noisy and turbulent delirium demanding restraint; the patient has sub-delirium, convulsive tremor of the upper limbs, subsultus tendinum, carphologia, crucidismus, and at times dysphagia; the belly becomes tympanitic, the liver enlarged and painful—the spleen also at times; the urinary secretion is sensibly diminished and sometimes suppressed.

In cerebral rheumatism the nervous phenomena manifest themselves after the appearance of the arthritic; the articular rheumatism begins in one or two articulations, and then becomes progressively generalized; the compromised joints are very large, red, and painful; the delirium observed is usually loquacious, obliging the patient to commit unreasonable actions; cerebral meningitis declares itself openly; in some cases the pleura and pericardium are attacked by the rheumatism; the fever which attends the whole morbid process is accompanied by copious perspiration; the liver and spleen remain untouched.

I have not yet seen a single case of rheumatic pernicious fever which did not termi-

nate fatally. The type of fever is always remittent or sub-continued. In November, 1875, I had occasion to observe a case of this species in the hospital of Nossa Senhora d'Ajuda. It was of a negro slave, who had come from an estate in the interior of the province of Rio de Janeiro, where he had long suffered from tertian intermittent fever. Coming to town, he was again attacked by the same disease, and after the third paroxysm he presented himself with continued fever, pain in wrist-joints, swelling of these articulations, and at the same time sub-delirium, tremor of the tongue and of the upper limbs, and dysphagia. The liver was enormously enlarged, the spleen also enlarged, the belly swollen, and the tongue dry and retracted. Later on supervened coma, the extremities grew cold, and the patient died forty-eight hours after the appearance of the paroxysm.

In this case, deprived as I was of access to the stomach in administering remedies—for during the last twenty-four hours not a drop of fluid passed by the œsophagus—I resorted to subcutaneous injections of the sulphate of quinine, while persisting in the use of this substance by enema. The interne of the establishment, Senhor Martins Costa, made ten injections of a saturated solution of sulphate of quinine on the inner sides of the arms and thighs, without the least favorable result.

Case 28.—The elder son of one of the oldest and most distinguished practitioners of Rio de Janeiro was attacked by a facial neuralgia, which occurred periodically, and yielded to the use of sulphate of quinine. When he thought himself well, he had a well marked paroxysm of intermittent fever, attended by severe pain in the knee- and ankle-joints. His father gave him twelve decigrammes of sulphate of quinine in two doses; in spite of this treatment, another paroxysm occurred, and the compromised articulations became swollen, enlarged, and reddened on the surface. The fever became sub-continued, delirium then set in, and later carphologia. When I saw the patient in consultation he was comatose; he died six hours after, having taken in twenty-four hours 3.3 grammes of sulphate of quinine (fifty grains).

XVII. In the *syncopal*, *tetanic*, *epileptic*, and *aphasic* forms are observed: in the first, frequent syncope, recurring whenever the patient quits the horizontal posture; in the second, the symptoms proper to opisthotonos, with or without trismus; in the third, true epileptic convulsions, such as are met with in puerperal, uræmic, or saturnine eclampsia; in the fourth, almost total loss of speech, a logoplegia, without the least disturbance of the movements of the tongue.

Case 29.—Joao Falleti, fifty-one years old, Italian, residing in Mar de Hespanha (Minas Geraes), jeweler, came to Rio de Janeiro to be treated for chronic congestion of the liver and spleen, the sequelæ of an imperfectly cured malarial cachexia. Lodged in a business house on the Rua de Visconde d'Inhauma, he was regularly following a course of treatment which I had prescribed in my consulting-room on the 11th April, 1874. On the 19th I was called to see the patient; found him lying down and not willing to get up, as he had already had three fainting-fits, one of which caused him to fall down and remain senseless for the space of ten minutes; the pulse was frequent, and the temperature of the skin increased; the liver and spleen continued enlarged, and the tongue was coated. The patient arose in my presence to urinate, as I wished to examine the urine, but was at once compelled to lie down in consequence of the vertigo which seized him. I gave him a castor-oil purgative, and after its operation one gramme of sulphate of quinine. The next day at 11 A.M. found the patient better; the vertiginous symptoms appeared only when he stood up. I pressed the sulphate of quinine four days more, and Joao Falleti returned to his former condition, continuing the use of the medicine prescribed for the chronic ailments which first led him to consult me. On the 28th June he returned to Minas completely recovered.

Case 30.—Raul, negro slave, twelve years old, entered the hospital of Nossa Senhora da Ajuda on the 26th October, 1874, on the third day of the disease. The evening of the 24th he complained of a pain in the head and had fever; on the 25th he still continued febrile, and was given a purge of castor oil; at 7 P.M. he complained of difficulty in opening his mouth, and of pain in the nape of the neck; on the morning of the 26th the physician called to see him found him with some opisthotonos and trismus, and, notwithstanding the great intensity of febrile reaction, diagnosed tetanus and advised the patient's removal to the hospital.

Condition on arrival: Temperature 40.2° (104.4° F.); pulse 112; no perspiration. Some spasmodic contraction of the levator muscles of the lower jaw, giving rise to moderate tris-

mus, which does not hinder the examination of the tongue nor the swallowing of fluids; no dysphagia; tetanic contraction of posterior cervical muscles, causing forced bending backwards of head; some contraction of dorsal muscles, inducing slight opisthotonos. Functional soundness of muscles of upper and lower limbs. Intense pain on pressure in cervical region of spine, radiating to the sides; no hyperæsthesia of limbs; frontal headache. Tongue very furred; belly flabby; liver enlarged and sensitive to percussion, and spleen normal; urine high-colored, without albumen. Heart and lungs normal.

Ordered twelve leeches to cervical region of spine; mixture containing fifteen centigrammes of tartar emetic and eight grammes of laurel-water; one gramme of sulphate of quinine, after operation of mixture.

Great was my surprise when I saw the patient next day. He was apyretic, without any of the tetanic symptoms of the evening before, cheerful, and asking for breakfast. The internes who closely attended this interesting case told me that after the leeching and antimonial mixture the child had a temperature of 37.3° (99.1° F.), and pulse 86. The mixture gave rise to vomiting, purging, and profuse perspiration; the sulphate of quinine was given at 5 P.M., and the same dose at 9 A.M. of the present day. Tongue less furred; liver less enlarged, and painless. Temperature 37.2° (99° F.); pulse 88. Strong pressure made in cervical region excites some pain.

Ordered six decigrammes of quinine taken at 1 P.M.; simple saline mixture containing ten minims of tincture of belladonna; ointment of belladonna to cervical region of spine; chicken broth.

The patient took sulphate of quinine up to the 31st. Convalescence was rapid; discharged November 6th.

In this case my judgment wavered for a moment between a spinal meningitis and tetanic pernicious fever. The lack of disorders of sensation in the limbs, upper and lower, the congestion of the liver, and the course followed by the disease, decided me to embrace the second opinion, besides the fact that the sulphate of quinine would have been in no respect prejudicial to the patient had the first been correct. The hyposthenic action of the antimony, and especially its effect upon the muscular system, inducing relaxation of the muscles, contributed powerfully to the promptness of the timely action of the quinine.

Case 31.—In a lad of fourteen, of extraordinary talent and unbounded application, residing in the largo do Capim, and a patient of my skillful colleague, Doctor Billac, I observed an instance of epileptiform pernicious paroxysms which went on becoming progressively more serious. When I saw the boy in consultation, he had already taken large doses of sulphate of quinine. But in spite of very rational treatment, at ten o'clock the night before (the infallible hour of the attacks) he had had convulsions, preceded by hallucinations of sight, and followed by comatose sleep. The association of valerianate of quinine with the sulphate, and with opium, later on, a change to Santa Thereza, and cold bathing by embrocation, cured the patient in a short time.

In 1867 entered the Santa Izabel ward the only case of aphasic pernicious fever I have observed. It was that of an Italian, Joao Victor by name, whose case, minutely noted by Doctor Monteiro de Azevedo, then one of my most distinguished pupils, as well as the clinical lecture to which it gave rise, was published in the first number of the *Revista do Atheneo Medico*, a monthly journal conducted by the medical students, which unhappily had but a brief existence. The patient to whom I refer had aphasia by logoplegia, resided in a notoriously marshy locality, and recovered completely in a few days, thanks to the large doses of sulphate of quinine he took.

XVIII. In the undefined form of pernicious fever, represented in my statistics by six cases, there is no one predominant symptom which characterizes the perniciousness; in one and the same paroxysm are noted phenomena of variable order, connected with various organic systems. . . . . In some cases every paroxysm is characterized in a different manner; in others there is a mixture and confusion of known and classical forms. In a young man who had just defended his thesis in our university when he was snatched from life, of the six very grave pernicious attacks which were the cause of his death—observed by the late Doctor Paula Fonseca, his father-in-law, by Doctor Ferreira de Abreo and myself, his attending physicians—there were no two alike: the first was clearly delirious, the second convulsive, the third delirious and neuralgic, the fourth delirious

and hydrophobic, the fifth algid, and the sixth comatose.

The following case gives a precise idea of the form which I call undefined:

Case 32.—Manuel Carvalho. Portuguese, forty years old, agricultural laborer, entered the Santa Izabel ward on the 1st of August, 1873. Had had intermittent fever at various times, contracted in Inhauma, where he had resided. A month ago removed to Engenho-Novo, and remained there more or less ailing.

On the 28th July was seized with a chill at 8 P.M., and afterwards had high fever and vomiting. Took a sudorific of infusion of orange-buds and elder-flowers, and on the 29th a saline purgative. Continued ill during day, and at night had very intense headache and delirium. Doctor Titara, who visited him on the 30th and 31st, ordered six wet cups applied to region of liver, an emetic of antimony, and sulphate of quinine.—This is the report furnished by a friend of Carvalho, who lived in the same house with him, and who accompanied him to the ward.

Condition on arrival: Expression changed, physiognomy indicating profound depression. Temperature 40.1° (104.3° F.); pulse 124. Sub-delirium; tremor of upper limbs; insomnia. Tongue dry, tremulous, covered with yellowish fur; belly tympanitic—bowels constipated—especially painful on palpation and percussion; vomiting, hiccough from time to time; liver and spleen much enlarged; suppression of urine, the catheter not drawing off the least amount of this fluid. Dyspnœa; diminution of resonance, and fine subcrepitant râles, in lower third of both lungs, posterior aspect; entire absence of cough.

Ordered: Quinine valerianate, one-third gramme every two hours in half a glass of *Agua de Inglaterra*, until six doses are taken.

℞ Tincture of valerian, Tincture of musk, Sulphuric ether, ää 2 grammes.
Syrup of orange-peel, 30 grammes.
Hydrolate of canella,* 150 grammes.

Two tablespoonfuls every two hours, alternating with the doses of valerianate of quinine.

A purgative enema containing assafœtida; blisters to calves of legs; six decigrammes of quinine sulphate to each raw surface produced by blister.

This vigorous medication was followed regularly and exactly under the superintendence of eight students named by me, besides the two internes. The patient went from bad to worse; at 9 P.M. his extremities grew cold and coma set in; he died at 3 in the morning.

*One part of canella to four of water, and distil.

Autopsy (seven hours after death): Injection of sinuses of dura mater, arachnoid vessels, and brain substance; some sub-arachnoid effusion. Great congestion of lower lobe of both lungs, old pleuritic adhesions in right. Nothing abnormal in peritoneum; liver very large and turgid with blood; spleen enlarged and softened; bladder contracted, containing about eight grammes of muddy urine, without albumen; kidneys much congested, with their cortical substance of a very deep dark-red color.

In this case, which was under the observation of the students only a few hours, it was not easy to say what was the form assumed by the pernicious fever. The nervous symptoms, such as sub-delirium, insomnia, tremor of upper limbs and tongue, authorized us to admit the ataxic form; the abdominal tympanites, extreme sensitiveness of the belly, vomiting and hiccough, led others to accept the peritoneal form; the congestion of both lungs, perfectly characterized on percussion and auscultation, attended by great dyspnœa, made some share the idea that it was a case of pneumonic form. What was evident was the existence of an acute and very grave manifestation of malarial poisoning, rebellious to the means employed before the patient's entering the hospital. The autopsy confirmed this judgment.

(*To be continued.*)

REMINISCENCES OF EARLY PRACTICE.

BY EDWARD WORTHINGTON, M.D.

Forty years ago, or may be even less, a medical man would as soon have dreamed of going to church without his prayer-book, or of going to bed without saying his prayers, as of going out on his daily round of duty without his lancet-case in pocket. In fact, it never was taken out of his pocket, unless when wanted for use or to be put into the pocket of another garment. I had a lovely silver one which I got for something or other in botany, in Edinburgh, more than fifty years ago, but for the last twenty-five years I have not seen it, except perhaps to exhibit it to the children as a sanguinary relic. It contained four lancets of "*Maw's*" make; the oldest and dullest one might be used in an emergency to lance the "darling

baby's gums," the next for vaccinations, while the other two were sacredly kept for bleeding only.

I sometimes wonder if I could venture to bleed a man now, it is so many years since my last venesection; but when I was a student my occupation seemed to consist entirely of bleeding. It was considered the *correct thing* to be bled at least every spring—as much the correct thing as was Mrs. Squeers's mixture of treacle and molasses, as a spring medicine, as a corrective in cases of inordinate appetite. Some people indulged their fancy twice a year, with extras whenever they had a "swimming in the head," or a reminder of hereditary tendency to apoplexy, or indeed any other convenient excuse. In our official sanctum it was a concession that bleeding and tooth-drawing were perquisites, from time immemorial, to the students, in the absence of the doctor. I need hardly add that no one ever left that surgery (who was not adequately protected), no matter what his ailment, without being bled or having a tooth extracted. Like the universal panaceas of the present day, those two simple remedies were the ones we relied upon. What if a wrong tooth was extracted now and then? There were plenty more where it came from! Or if a vein was transfixed and a thrombus or aneurysm was the result, it only confirmed our diagnosis and established the fact that the bleeding was necessary.

As a rule, no one considered it necessary to consult us as to the propriety of a bleeding. A man walked in as a man would now walk into a barber shop to be shaved, saying as he did so: "I want to be bled, please." Bandages and basins were always on hand; and when a good quart crockery bowl was nearly full, if the operator showed signs of stopping the flow, very commonly the man would say: "Oh, don't be afraid; let it run, sir. I haven't been bled for a good while." When satisfied, the arm was bandaged, the fee paid, and the man departed as light-hearted as a lark! These little financial transactions were generally followed by refreshments from an adjoining confectioner's, and consisted of "hot cross buns," ice-cream, and ginger beer. But this programme was cruelly broken into, at times, when the patient forgot to bring his purse, or when the doctor happened to come in before he left, when the half-crown was dropped innocently into the doctor's pocket, and we were left without our "hot cross buns."

Skippers, and sea-faring men generally, were the ones who were more frequently bled, in the spring and fall of the year—the first to enable them to withstand the summer's heat, and the latter the winter's cold. In the winter—unless in special inflammations—our occupation, like that of Othello, was gone, but in the spring-time our victims would average three or four every day. Such big, brawny arms as the men of those days had, the veins standing out full and tense, inviting an opening! Now they look as though they were crying out for more blood. Why? Is the race degenerating? The old fellows used to declare seriously that the more frequently they were bled the stouter and stronger they grew. Perhaps we may return to the old ways yet.

There was a fashionable tradition among the gentler sex, that the foot was the proper place to bleed from—it did not induce plethora, and drew the blood more immediately from the head, and was not followed by discoloration or scar at the elbow, as in the vulgar form of bleeding. All of which were women's reasons—and good!

At the old Mountain Hill House, in Quebec, there was a famous relic of which no one knew the history. It was in the form of a light wooden cross, the upright of which was about an inch square and three feet four inches in height; the arm, or cross-piece, was fixed about four inches from the top of the upright. It stood in a convenient corner of the surgery, and never was lost—it was too frequently called into requisition. Old *habitués*, even after a three months' voyage, returning on the old errand, would look round for the old familiar cross. The doctor was not specially given over to a preference for the use of a cross, when the back of a chair would answer the purpose; but the surgery had been occupied by a succession of doctors, the firs: of whom, an old "chirurgeon," had brought the cross with him from *la belle France*. Its use went with the occupancy of the office, and consisted simply in this: that whenever a vein was opened, the cross was put into the hand as a rest, having

no religious significance whatever—at least in our day none was intended, but certainly it was regarded as a relic by many a one who held it in his grasp. Many a brave man, many a one with a grand historic name, of France, or England, or America, has shed his blood, or had it shed for him, beside that cross. No doubt of it! Only history is silent on the subject!

In those days, no case of pneumonia, pleurisy, peritonitis, or any other inflammatory affection, could be treated without bloodletting. The moment the doctor walked into the sick-room, without wasting time on superfluous questions, he called for a bandage and a bowl. These wants having been anticipated, and the remark being made, "Yes, sir, they are all ready—I knew you would bleed him," the patient was sat up, a free incision made, and a rapid bleeding followed, to approaching syncope, and then the patient was laid back on the pillow. Strict orders were always given to put the bowl away carefully until the next visit, and if the blood then was "buffed" or "cupped," or the "serum" out of proportion to the "clot," a second bleeding followed, and a third, until the disease—or the patient—succumbed! One or the other had to surrender!

So great was the popular feeling in favor of bleeding, that however the case ended, it was all right — everything was done that could have been done. If a poor unfortunate tumbled down in the street from exhaustion, epilepsy, or accident, the cry of the crowd was, "Run for a doctor!" "Bleed him, bleed him!" "Sit him up—if the blood runs he will be all right!"—but, unfortunately, sometimes it would not run!

Woe betide the doctor who at such a moment seemed to hesitate about using his lancet: he would have been denounced as a fool, and exposed to personal violence. This heroic treatment was not confined to the "*Oi polloi*," but its theories were accepted in the "upper circles of society." It is appalling to read of the exploits of our forefathers in those blood-letting days, even where royal blood was concerned—indeed, our forefathers were reckless in shedding royal blood when the condition of the State seemed to require it. In the official account of the accouchement and death of the Princess Charlotte, it is related that "Sir Richard Croft was fixed on for the accoucheur, in addition to whom she had the advice of the justly celebrated Mr. Baillie and of Doctor Stockmar, the resident physician of Prince Leopold. She consulted these gentlemen in the management of her health, and by their direction, being of a plethoric habit, *was* FREQUENTLY *bled*." At the embalming of the body the physicians were "of opinion that the constitution had been exhausted by the severe and protracted pains," although we are told in another place that there was great "inertia." The idea that she had been too *repeatedly* bled is not referred to.

When George, the great Father of the American Republic, lay dying, at midnight, January 29th, 1820—I do not mean George Washington, but the other George, the Third George,—his most affectionate son the Prince Regent, "the First Gentleman in Europe," was unable to attend at his father's death-bed. But Sir William Knighton was with him on the night when the news arrived from Windsor, and testifies that it was received "with a burst of grief that was very affecting." "His [the First Gentleman's] situation presently became most critical. At his favorite residence, Brighton, he had caught a cold, for which he lost *eighty ounces of blood*. But on the night of February 1st, a fresh attack coming on, he was almost in danger of suffocation. Sir Henry Halford was absent, and had left directions that there was to be no further bleeding till his return. The cautious Knighton was afraid to disobey, and Mr. Grenville states that he might have died but for Bloomfield's sending for Sir Maurice Tiernay, who promptly took *fifty ounces of blood from him*, almost bleeding him to death (!) It was believed that but for this step he would have followed his father on the second or third day of his reign." By the 17th he received addresses from the City of London. Sheriff Perkins declared that His Majesty was one of the most robust-looking men in the kingdom, but the Council declared that he was "very weak and tottering." Poor gentleman; no wonder he was weak and tottering!

Where could a physician be found to-day who would subject a patient to such treatment?

Where could a man be found to-day who would survive such treatment?

The Prince Regent could stand any amount of bleeding, and so could his beloved country!

Even as late a writer as Sir Thomas Watson on the treatment of pneumonia, says:

The abstraction of blood will be effectual, *cæteris paribus*, in proportion as it is *early*—the patient should be bled in an upright position, by a large orifice, and in a full stream—and be continued until the pulse becomes *softer;* or, if it were contracted, until it becomes *fuller;* or until *syncope* appears to be at hand. . . . The patient should always be seen within four or five hours from the period of the first venesection, that a timely repetition of it may take place. Many fatal cases have probably *been* fatal from want of this attention; a vein should be opened, if necessary, two or three times in the twenty-four hours.

As an auxiliary to this, blood was taken from the surface of the chest by cupping-glasses and leeches.

Doctor Gregory, of Edinburgh, used to say in his lectures that provided he was called *early* to a case of pneumonia he would be contented to dispense with all other aids than those of "*a lancet* and *water-gruel.*" But these extreme views of Gregory's met with criticism, for it was said of him that while he "used to bleed to the verge of convulsion, his colleague Doctor Rutherford seldom went beyond three bleedings, and generally accomplished his object by two—judiciously timed and measured. *His* patients recovered quickly; Doctor Gregory's very slowly."

All this seems very odd in these days, and yet I am not ashamed to throw in—modestly—my approval.

The pneumonia of to-day is not at all like the pneumonia of forty years ago, and requires an exactly opposite line of treatment. Hearing Bennett, in Edinburgh, preach of stimulants in pneumonia, made me look upon him as a heretic, but after some years I was converted to the present faith.

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From the time when the use of the lancet as the sheet anchor in medical practice began to fall into disuse, a number of things in succession contended for the place of first favorite—notably the two great rival anæsthetics, sulphuric ether and chloroform, and the uses of their great natural ally the hypodermatic syringe, the spray, and the clinical thermometer.

The world seemed to have been preparing itself for the coming of an anæsthetic. Men had begun to think of the possibilities. Nitrous oxide gas and mesmerism had contended. The first was abandoned, for the time, as beyond control; the second was uncertain and incomplete, and soon forgotten.

When the magnificent Earl of Durham came out to Canada as Viceroy, he brought in his suite one Edmund Gibbon Wakefield, a great enthusiast on mesmerism. He was not brought out specially to mesmerize the Canadians, or the Viceroy, though he had used his mesmeric blandishments so successfully upon the tender affections of a youthful boarding-school heiress in England as to make a residence in Canada rather desirable. In Quebec he courted the society of the principal medical men, and with Sir John Dorat, the Governor-General's physician, some private *séances* were held, at which I was most courteously allowed to be present, although only a student. Some minor operations were performed—one for the removal of a section of a rib—most successfully, the patients having been mesmerized by Mr. Wakefield. In a short time, however, the profession got tired of it, and no further experiments were made.

I think I had the honor of performing the *first capital operations* made in Canada under the influence of sulphuric ether, and subsequently of chloroform. On March 14th, 1847, I amputated below the knee, in the case of a man named Stone, at Eaton Corner, Quebec, in the presence of Doctor Rodgers of Eaton, Doctor Andrews of Cookshire, Reverend Mr. Sherrill, and (I think) Mr. Samuel Hurd, father of Doctor E. P. Hurd, now of Newburyport, Mass. The effects of the anæsthetic were of the most successful and remarkable character. Stone, during the whole time of the operation, retained his consciousness, talked rationally, and made some witty replies to questions put to him, converting the scene from one of a painful to a most ludicrous character. Both during the operation and after it he expressed himself as knowing perfectly well what was going on. At one time he had a "presentiment of pain,"

for he gave the word to "*pass the bottle,*" which he cherished as a bosom friend.

On March 14th, 1847, I tied the femoral artery, and on April 3d amputated above the knee, both under ether. These are the first published cases in Canada of *capital operations under ether.* In November, 1846, some operations had been performed at the Massachusetts General Hospital.

On the 24th and 25th of January, 1848, I used chloroform most successfully, a phial of this new anæsthetic having been presented to me by my old friend the late S. J. Lyman, of Montreal, prepared by himself, and the most perfectly pure chloroform I ever used.

I always had a slight weakness for chloroform over ether, influenced, I dare say, by a very striking case in my early experience. I had to remove a portion of the tibia, and the day before the operation I went with my friend Doctor Samuel T. Brooks, now of St. Johnsbury, Vt., to see the effect of the inhalation. I saw it, and felt it too, for after the man had taken a few inspirations, in a weak moment I gave his arm an inquiring pinch—"Do you feel that?" "*Yes! do you feel that?*" and in a second we were tumbling over the floor, near a red-hot cooking-stove, and Doctor Brooks endeavoring to prevent murder! I was punched in the ribs that day, enough to last for a month. The operation was made on the day following, but I had to keep in the background until the man was fairly under the influence of the ether, for if he got a glimpse of me, or heard my voice even in a whisper, he was ready to renew the fight. Strange to say, I had had no quarrel with the man, and he did not want to fight any other person. He was as untamable as a man behind the rope-netting during the exhibition of nitrous oxide gas.

All these cases were reported at the time in the *British-American Journal* for 1847–8, published in Montreal by the late Archibald Hall, M.D.

In the early days of the "spray" I was invited to be present at an ovarian operation. It was in the second story of a private house, eight or ten medical gentlemen being present. The patient was on the operating-table; at the head were two smaller tables, on one of which stood a small spray atomizer in full blast, and on the other a quart bottle of ether newly opened, fresh and full. A learned professor and most eminent surgeon was giving the ether, from a large cone-shaped towel which covered the patient's face. As the first incision was being made, there was a rush and a blaze; the cone was one mass of flame, enveloping the professor's hands and hair. I was standing within reach of the bottle of ether, a glass one, which, to my horror, was uncorked. Clapping one hand over its mouth, the flames close beside it, I grasped the bottle in the other, and made a dash to get out of the room—which was a small one, and in the excitement not easy to get out of. The professor endeavored to throw the blazing mass out of the window, which was some four or five feet beyond the opposite end of the long table—no great throw for any solid substance over a clear space, but with a blazing mass to divert the aim quite another matter; instead of going out of the window it went into a roll of absorbent cotton on an adjoining stand, set that on fire, and fell back on the floor, firing more absorbent cotton on the floor, under the table, where it had been put carefully out of the way. Then as I was pushing to get out, the rolls of blazing cotton were being madly kicked about, making matters infinitely—dangerously—worse; everyone for himself—a regular pandemonium. It was said afterwards that I had carried the bottle of ether into the back-yard before I parted with it, but that is a slander; I did carry it down-stairs, and returned.

What a scene was there! The poor woman's hair and eyebrows burned, and the skin abraded from the efforts to put out the fire. A most pitiable object, truly. The professor's hair, whiskers and brows were charred, and the hair on his bare arms burned to the elbows. But if the ether bottle had taken fire, it would have been a sad business for the whole of us. Before anyone thought of turning on the water, holes had been burned into the flooring. The person to whom was entrusted the bringing of the ether and cotton had brought an unopened bottle, and as much cotton as would have supplied a surgical ward for a month. When it was brought in, it excited a laugh; there were, I think, six rolls in all. One was separated for present use, and the rest put away under the table.

Strange how history repeats itself. A few days afterwards we heard of a similar but more serious accident at one of the large hospitals in Europe, but the thing was kept quiet — not even an irrepressible reporter heard of it until it was too late.

No one appeared to have seen where the flame originated, but doubtless it came from some imperfect meshes in the wire screen of the atomizer. At any rate the heavily charged air—charged with the vapor of sulphuric ether—touched off the saturated cone. The wonder is that we escaped as well as we did. The "*spray*" atomizer found its way into the street, and became an object of admiration to the street Arabs!

And the spray! What has become of the spray? Only a few years ago the very atmosphere was clouded with carbolic spray. There seemed to be a promise that in time every "germ" in the universe would be annihilated. The very soul and spirit of treatment seemed to consist in antiseptic vapors. If a dilatory student, coming in late to the operating-theatre, caused a draft from the open door to waft the spray for one moment from the wound, he was deemed to have taken the patient's life in his hands. Where is the spray now? Even some of the stoutest adherents of the spray system are now simply boiling their instruments and bathing wounds with pure water that has been boiled! Old-fashioned means of cleansing, surely!

Some surgeons now almost hint that a few germs in certain cases would be of advantage —for instance, as a convenient stimulus to the periosteum in the production of new bone. This is perhaps an extreme view, but what would a theory be worth without opposition? Certainly we knew nothing of "germs" in those days—those good old days when we were not disturbed by evolution, and protoplasm, and other vexatious problems so learnedly written about and so little understood; and yet wounds healed, and patients did well, even where well-waxed silk ligatures were used to give them firmness and to render the process of tying the blood-vessels more easy—and where fresh wounds were *irrigated* with common water. And men and women grew and "multiplied exceedingly, and replenished the earth."

Even now, after the lapse of so many years, after having seen the most delicate and difficult operations performed without the use of anæsthetics, it is impossible to explain, hard to understand, how it was done! An amputation of an extremity, with sometimes shrieks enough to appall the stoutest heart, but more frequently with an inward agony, of course, but no audible sound. Operations for hernia, for the removal of tumors from the neck, for the tying of important blood-vessels, as in aneurysms, where an unexpected movement on the part of the patient might result in most serious consequences. Yet all these things were done, and done well, by men of iron nerves, before the days of chloroform and ether.

When Sir James Simpson discovered chloroform he gave birth to a host of surgeons, shining lights of to-day, who would have sunk into their boots but for the artificially induced unconsciousness of the victim. Truly chloroform has been a blessing to mankind, and womankind too—most essentially; and what is said of chloroform must be said of ether. What two things in the history of the world have achieved such conquests for humanity as the discovery of these two agents? How the victories of Cæsar, of Alexander, of Napoleon pale before those of the men who could have inscribed on their shields, "*I conquered pain!*"— conquered pain not only for their friends, for their country, but for all mankind. How the hospital inmate, and the agonized mother in her great sorrow, have blessed its results! How much it has done for *preservative* surgery, and how it has given increased confidence in entering territories previously considered unapproachable! The surgeon can now do, without danger, what would formerly have involved an unjustifiable risk.

Far be it from me even to evince a desire to pose as an iconoclast. I have been guilty of having had little idols of my own, and I am guilty of retaining an affectionate remembrance of some of them, but I shall never be happy or have a clear conscience until I unbosom myself about one little pet idol—the clinical thermometer—which is at times a little too much for me. No one can appreciate its use when it is necessary to use it, more than I can, but I have an utter contempt for its use when its use is not necessary—

when it is being made a parade of—made to change places with the doctor, and the destinies of the patient directed by the record of its markings. The well worn but too sarcastic definition of a physician as "one who pours drugs—of which he knows nothing,—into a body—of which he knows less," is ridiculously unjust; but it must be confessed that not only is the action of the present therapeutic weapons which he employs so recklessly, uncertain and doubtful, but the wisdom of attacking a *particular symptom* is not always very clear. At present it is the custom, if the patient has a temperature above normal, to give a dose of antipyrin or phenacetin, or a cold bath, for no other reason in the world than because the thermometer said so. The temperature is thus reduced for some hours—perhaps—only to rise again—probably. Very probably. But how do I know that it has been an advantage to have that temperature lowered at all? Considering the processes going on in the body which have produced the fever, is it wise to assume that that fever was not serving a beneficial purpose? Still, as the temperature rises or falls, another dose—or bath—is given, or withheld and brandy given instead. And so the little game of "Here she goes up, up, up—and here she goes down, down, *down*," is being played. As to the wisdom of that kind of thing, as the auld Scotch wife said, "I hae ma doots o't." It is a mode of treatment arbitrary and empirical, not much in advance of the old mode of procedure (when bleeding was in vogue) when the old thermometer of pneumonia, the "buffing and cupping" of a previous bleeding, was taken as an indication for more.

It must be admitted that the ceremony of "taking the temperature" is a most imposing one—almost perfect as a matter of ceremonial—in a small way. The doctor comes in, sits down, and, after the usual civilities, pulls out his pocket-lens, wipes it most carefully, and does the same to his *pince nez;* then out comes the thermometer, which receives the same polite attention—from his pocket-handkerchief, perhaps,—after which he most insinuatingly requests the patient to put the instrument under her tongue, as before, and close her lips. Then, after carefully taking the time, he turns to the nurse or attendants with the usual routine questions as to the due performance of the various functions, *until the time is up.* Then the pocket-lens investigates; a solemn "hem!" or a joyful "ha!" follows, and the little clinical idol is brought to the window or the lamp and submitted to every one in the room, as to the correct reading. "What do you make of it? Is it $103\frac{8}{10}$, or $103\frac{8}{11}$?" And this kind of rubbish is repeated at each visit. The friendly inquiry, "How is the patient to-day?" should be, "How is the *thermometer?*" If a question is thoughtlessly put as to the condition of the patient, the reply will be, "Well, the temperature is so-and-so!" All this may be very necessary, but the same thing could be done with less display.

I remember a dear old lady saying to me some years ago: "Oh, Doctor, you ought to get one of those things like my son John's. Whenever he puts it under my tongue, I feel it go right through me, up and down my neck. It is such a cute little thing, too—it just tells of itself exactly how you are."

Sherbrooke, July 21st, 1894.

SUPERFŒTATION.

Doctor E. C. Boyle, in the *Charlotte Medical Journal*, reports that after delivering a woman at full term, and expelling the placenta by Credé's method, there followed, in a separate sac, a fœtus apparently three or three-and-one-half months old. The two placentæ were apparently attached to each other at their margins by a substance resembling the jelly of Wharton, but the circulation in each was independent—there was no anastomosis between the vessels. Both the fœtus and its placenta were normal.

NEW DRESS.

Practice, published in Richmond, Virginia, has been enlarged both as to title and number of pages. The change is every way creditable and desirable.

NEW MEDICAL JOURNAL.

The *Medical Epitomist*, published in Indianapolis, Indiana, and which promises to be "an epitome of everything of professiona interest."

Society Meetings.

THE WINDSOR PHYSICIANS AND SURGEONS' ASSOCIATION.

The regular meeting was held Tuesday evening, June 12th, 1894, at the residence of Doctor Coventry, who occupied the chair in the absence of President Samson.

The minutes of the previous meeting were read and approved.

Doctor Ashbaugh presented an interesting paper on "Cholera Infantum."

Discussion.—When called early to a case of cholera infantum, Doctor Carney would at once wash out the rectum, and prescribe calomel or perchloride of mercury in minute doses; believes the introduction of food should be with caution, those articles of diet that produce the least intestinal irritation being, probably, the best, such as barley-water, etc.; prefers predigested foods.

Doctor Bell expressed himself as believing that cholera-infantum fatality owes its cause to the suddenness of onset and course, rather than to its pathology *per se*. He would wash out the rectum first of all, and then if the extremities were very cold would apply mustard plasters; if there were much irritation of the nervous centres, would give a hypodermatic injection of morphine and apply mustard plasters to the whole length of the spinal column. Treatment should be of a tonic, alterative, acid, antiseptic and laxative nature. After the bowels have been cleared out, would give sulphocarbolate of soda. A great deal of stress should be laid on the treatment of high temperature. If the extremities are cold, would apply mustard plasters to get the blood out of the mucous tract.

Doctor Cruikshank would allow plenty of fresh air and enjoin strict environment. The first thing to do is to consider the cause of the affection; would first give a purgative; believes in the administration of castor oil. If the child craves cold water, would give it in order to get the stomach well washed out; small pieces of cracked ice to relieve vomiting. To reduce the temperature, would bathe the body and give cracked ice—employ cold sponging. Favored a water diet or a milk diet, and had found nothing better than white-wine whey diluted with lime-water; if nursing, would allow the breast at frequent intervals. Regarding medication, he agreed with Doctor Bell; would give hypodermatic injection of morphine and employ bismuth by the mouth.

Doctor Prouse approved of strict environment as mentioned by Doctor Cruikshank. In the way of treatment, would at once shut off all exciting causes—improper food has a great deal to do with the cause. The mother's milk is the best food for the child; next to this, cow's milk—likes cow's milk diluted from one-fourth to one-half with water, to which has been added a little salt or sugar, and finally pepsin and lime-water. If child cannot take this, would give beef with the juice squeezed out. Gives opium in some form; would give calomel in small doses, and likewise wash out the rectum. Some preparation of opium with bismuth and a few drops of tincture of kino, and if this did not relieve would resort to nitrate of silver. Has had no experience with arsenite of copper. The food should be properly looked after.

Doctor Hoare, when called to attend a case of cholera infantum which has continued for some time, would wash out the stomach, then give a dose of calomel to act upon the liver, to be followed by a dose of castor oil. Sometimes, when the stomach is irritable, gives perchloride of mercury.

Doctor Coventry: "The disease is induced largely by milk diet. Success depends upon the treatment. Food should be almost entirely cut off in a child with cholera infantum; what the stomach will retain, is the principal question in giving food. Like Doctor Bell, I have strong belief in the hypodermatic use of morphine; in a child one year old would give morphine sulphate one-sixteenth to one-twelfth grain,—if a delicate child, only one-twentieth; have never had a death from it. Use calomel with bicarbonate of soda; sometimes give svapnia, and as an antiseptic the perchloride of mercury. Lactic acid is a favorite remedy in cholera infantum and summer diarrhœa; I consider it valuable combined with some preparation of opium. Allow plenty of water—preferably hot water, as it sooner allays thirst than cold, and likewise relieves vomiting. I rely greatly upon arsenite of copper, one-hundredth grain to four ounces of water, one drachm of which is administered every fifteen minutes; if the case does not respond in two hours, it will not be of much avail."

After partaking of Doctor Coventry's hospitality the Association adjourned to meet at Doctor Prouse's residence the second Tuesday in August.

D. E. BROOKE,
Secretary.

Windsor, Ontario.
August 1st, 1894.

NORTHERN OHIO MEDICAL SOCIETY.

The regular session of this organization will convene at the Park Hotel, Oberlin, September 6th, 1894.

The Medical Age.

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Editorial.

INTRAVENOUS MEDICATION.

The work of Italian clinicians during the past half-century has been characterized by such patient, sober, and capable researches as almost to reinvest the motherland of European medical science with its ancient glory. While the medical profession of almost every other civilized country has time and again proved the easy prey of medical sensations, illusions, and fads, the leaders of Italian medicine have exhibited admirable conservatism and a keenness of insight which leaves no fallacy unpunctured. When Koch's tuberculin fairly carried the entire German medical world off its feet, the voice of protest and warning came from Italy—from Mariano Semmola. Fancy theories and superficial deductions apparently do not flourish on Italian soil.

These reflections are suggested as a fitting introduction to the work of another well known Italian clinician—Guido Baccelli—who has performed many experiments in connection with the intravenous injection of quinine and corrosive sublimate—a work that gives promise of important practical results.

Despite Nothnagel's unfavorable opinion, Baccelli found that intravenous injection of neutral solutions of quinine hydrochlorate was absolutely innocuous. Applying this method to the treatment of severe malaria, he obtained highly satisfactory results. When he first determined to employ corrosive sublimate by the intravenous method for the cure of syphilis, there was general protest in view of the supposed noxious action of this salt upon the circulation. To-day these injections are employed in Europe, in clinics and in private practice, when dealing with syphilis unamenable to ordinary specific remedies.

The solution used by Baccelli is: Corrosive sublimate, one gramme; sodium chlorate, three grammes; and distilled water, 1000 grammes. Subjecting the skin to rigid asepsis, the needle of the syringe is introduced into a vein at the angle of the elbow, or at the surface of the hand or limb, after assuring the prominence of the vessel by obstruction of the return circulation; that the lumen of the vein is reached, is known by the absence of pain and subcutaneous swelling. When properly made, no local irritation supervenes. After the injection of minimum quantities of sublimate, a flow of saliva ensues in five to six minutes.

In beginning treatment, one milligramme of sublimate is injected daily—that is, one cubic centimeter of a 1-to-1000 solution; later the dose is increased to two, three, four, and eight milligrammes, the latter being the maximum. When half the maximum dose is reached, the strength of the solution may be doubled as a matter of convenience, thereby reducing the bulk to be injected. In urgent cases Baccelli injects at the very outset from four to five milligrammes, but only when the vigor and tolerance of the patient are assured.

The following advantages are emphasized for the endovenous method:

The small quantity of the remedy employed:

The possibility of combating certain symptoms which indicate true syphilitic infection of the blood:

The prompt and beneficial action on the vascular walls, which are the favorite seat of syphilitic alterations.

Thus direct introduction of mercurials into the veins in specific cases may entirely supersede the more tedious and less certain method of medication through the lymphatic glands.

In treating echinoccal-cysts, Baccelli also claims good results: If the parasite is in the liver, the cyst is transfixed at its highest point with a trocar two and a half millimeters in diameter, and a moderate quantity of fluid withdrawn—about thirty cubic centimeters; then through the same tube is injected a solution of sublimate of suitable strength, when the trocar may be removed, the aperture closed, and a bandage applied; after five days the latter is no longer required, and the patient is cured.

Baccelli is confident that the direct intro-

duction of medicaments into the circulation will be generally adopted by clinicians, and applied to other than syphilitic diseases will yield equally brilliant results.

LACTOPHENIN.

Among the numerous antipyretic remedies which have sprung up during the last decade, the new substitute for phenacetin, known as Lactophenin, is apparently most worthy of attention; it is distinguished from phenacetin only by the fact that a lactic-acid replaces the acetic-acid radicle in connection with ammonia. It is a beautiful crystalline powder, of slightly bitter taste, soluble in 330 parts of water.

Like antipyrin and phenacetin, Lactophenin promptly induces depression of bodily temperature when the latter has been unduly and artificially exalted: indeed, sensibility and voluntary movement may be completely (and reflex movement almost) suppressed, without involving any perceptible prejudice to the respiratory and cardiac functions. It possesses the calmative properties of phenacetin in far greater measure, and its action as observed upon animals appears to closely resemble urèthan narcosis. The depression of temperature is prompt and calm, supervening gradually and persisting for hours; the re-ascent is slow and unattended by chill.

The first therapeutic experiments undertaken were by Landowski of Paris, and Jaksch in Prague, and both reported very favorably thereupon. According to the former, in doses of sixty centigrammes Lactophenin is almost identical in action with antipyrin, and if the dose be increased to one gramme a distinct hypnotic action is superadded. Jaksch considers the tendency to sedation, which is distinctly manifested in the treatment of typhus, the most valuable property of the drug; under its influence, he declares, "delirium subsides, the sensorium is relieved, and the patient enjoys a subjective comfort such as can be imparted by no other therapeutic agent."

At the medical clinic of Basle, Switzerland, Doctor Jaquet employed in forty-two instances—in patients suffering from typhus, pneumonia, erysipelas, influenza, and acute febrile tubercular affections—and the antithermic effects claimed for the drug by Landowski and Jaksch were corroborated. He adds:

Lactophenin is an agreeable and reliable antipyretic, effecting a distinct and persistent depression of temperature when administered in as small doses as fifty and seventy centigrammes, even in cases of stubborn erysipelatous fever; and at the same time ominous or unpleasant symptoms never intervene.

In two cases vomiting followed, but both in very sensitive females who often suffered emesis spontaneously; and in one instance, a case of erysipelas of the head, was observed an abnormal fall of temperature, the general condition previous having been perfectly good—at 11 A.M. she received one gramme of Lactophenin, her temperature being 104°; at 1 P.M. it had fallen to 102°, at 3 P.M. to 100.5°, at 5 P.M. to 96°, at 7 P.M. to 95.2°; then the temperature again mounted, oscillating the next day between 99.5° and 100.5°. During the whole time the patient experienced no discomfort aside from a slight perspiration; the pulse was full and calm, the respiration regular, and sensorium clear. The only two symptoms which may be frequently observed as a result of the administration of Lactophenin are, moderate diaphoresis and slight numbness; but even these are never so pronounced as to give the patient cause for complaint, and no debilitating action can be detected as regards the heart or respiration; and commonly the pulse becomes fuller and slower, while the breathing is unaffected; dyspnœa or collapse was never witnessed.

The chief virtue of Lactophenin is less its antipyretic properties than the sedative hypnotic action which is concurrently manifested; but in order to attain this latter result, doses of eighty centigrammes to one gramme must be given. In individual cases a calm sleep supervenes in from one to two hours after absorption, persisting for a considerable period. In most cases, however, excited patients are calmed without falling asleep, and their subjective state is rendered comfortable. In cases of croupous pneumonia the consensus of opinion of many observers is, the drug induces general mitigation of pain and more free respiration; like results were obtained in phthisis, the cough also being relieved, and

when the dose was raised to one gramme every evening, there was general improvement in sleep. Another striking manifestation of the sedative properties of the remedy was observed in various cases of erysipelas with violent delirium. Doctor Jaquet records one instance of an individual, thirty years of age, a hard drinker, with florid complexion and temperature of 104°, who in his delirium was so obstreperous he was obliged to be confined—two persons could not hold him; three grammes of Lactophenin were so speedily effective that he fell asleep, and on awaking at the end of several hours remained quiet in bed, though the delirium persisted; by the continued administration of the drug it was possible to keep him in a semi-somnolent condition until the delirium subsided spontaneously.

At the present time it is impossible to estimate with precision the hypnotic value of this drug, but apparently it occupies a place intermediate between sulphonal and urethan.

THE SUBLINGUAL ADMINISTRATION OF HYPODERMATIC TABLETS.

Doctor Paulson writes *The Lancet* (London) that he has found a new use for hypodermatic tablets, viz., their sublingual administration. They may in their entirety be placed beneath the tongue, or a solution made in the usual way and a few drops allowed to fall on this organ. He asserts that the medicament thus placed will exhibit its physiological effect almost if not quite as quickly as if employed subcutaneously, particularly if one takes into account the time essential to prepare the syringe before the injection.

It is somewhat curious, if Doctor Paulson's statements are true, that such a method of administering potent remedies should have been so long overlooked; and yet it apparently has a basis of rationality from the fact that beneath the tongue is a large surface covered with thin transparent membrane nourished by a great number of vessels of considerable size, and moreover, particularly rich in distribution of active absorbents.

There are many cases in which the sublingual method of administration would doubtless be found of infinite service and often preferable to the hypodermatic, not the least of which is the absence of unfavorable impression often created upon the mind of the patient by the latter method. If the efficiency and celerity of sublingual medication are all that is claimed, it certainly should be wider known and come into very general use.

Another advantage is avoidance of the difficulty oftentimes encountered in employing powerful remedies by the stomach—this organ may be "in a state of rebellion," secreting mucus to shield its irritated membranes, and contracting frequently to relieve itself, consequently one can know little of what proportion of a remedy thus introduced will be absorbed and what proportion merely serve to increase the aggregation of excretion and waste. On the contrary, by sublingual administration the practitioner is not only certain of the dose, and that it will be absorbed within sixty to one hundred and twenty seconds, but is assured of the full physiological result in about ten minutes to a quarter of an hour. Certainly this simple plan is worthy of trial, and we should be very glad to hear from medical men as to the results obtained. It is said that a tablet of pilocarpine introduced under the tongue acts even more quickly and profusely than when employed hypodermatically. Moreover, there is no hypodermatic tablet, satisfactory in composition for use in the syringe, but what should, if all Doctor Paulson claims is true be equally available and effective when employed sublingually.

NEW MEANS OF LOCAL ANÆSTHESIA.

One Doctor K. L. Schleich, of Austria, claims to have discovered that absolute immunity from pain, even during protracted operations, may be obtained by subcutaneous injection of a sugar or salt solution, or of merely cold distilled water; that the results induced are to all intents and purposes identical with those obtained by like employment of cocaine. He adds:

The patient may remain perfectly conscious during the amputation of hand and foot without undergoing the tortures so often inflicted upon the battle-field, or the exceptional dangers of syncope ever present in the

operating-room when general narcosis is resorted to.

It is declared that this discovery has already borne the test of several experiments and is about to be applied in the hospitals of Vienna. The explanation of the phenomenon is:

Local insensibility to pain is induced in the case of cocaine by purely chemical changes, while cold water or solutions of sugar and salt act mechanically through high pressure and low temperature. Under the influence of the high pressure and sudden low temperature the blood and lymph are driven from the places operated upon, to where the pressure is less. The tissues are thus deprived of their supply of blood, and temporary paralysis of nerves results.

The foregoing seems to have met with favor in numerous quarters, and in one instance at least a surgeon of authority affirms that "its importance is all the more undoubted, seeing that if in a given case cold water alone should fail to produce the needful degree of insensibility, a weak and absolutely harmless solution of cocaine would prove certainly efficacious."

Whether true or false, it is hardly probable that surgeons will give up the use of cocaine, which is deemed certain, in favor of a method which will always be apt to carry with it a feeling of indefiniteness.

EDITORIAL NOTES.

The germ of the Brown-Séquard-Hammond reconstructive therapy has been exhumed from the ruins of mediæval alchemy; but a novel application of it is recorded in Parkman's "Old Régime." Under Louis XIV. a heretic in Canada was a *rara avis*, yet a few Huguenots did manage to find footing there. One of these, a headstrong "blasphemer," fell into the hands of a nun at the Quebec hospital, and it goes without saying that she left untried no argument which had in it even the faintest possibility of convicting power. All in vain, until she bethought her of a sacred relic – some bones of Saint Felicité; she took a very small portion of the bone, and, pulverizing it, mixed it with the rebellious Huguenot's morning beverage. There was not enough bone to impart even a suspicion of calcium salts, but the potency was not to be measured by the gross quantity—the one conclusive circumstance was that what there was of that "dope" was once a part of the anatomy of an ultra-orthodox saint; the patient had lost the use of his gland of orthodoxy, and this accordingly was just what he stood in need of. But whatever may be the rationale of the process, the issue of the nurse's experiment was most happy, for the Huguenot (blissfully ignorant of what was in the coffee) at once threw up both hands and surrendered. He was one of the last, if not the last, of his kind, to hold out against the persuasions of the church; so that after he had been soundly converted by the dust of a dead saint, the *Intendanté* of the Province was able to answer the admonition of Louis to deal rigorously with the heretics: "Thank heaven, there are none here." This case must have been inadvertently overlooked by the compilers of testimonials for animal extracts.

Bravo!—

The *Times and Register* sensibly remarks that "the surgeon who opens a woman's abdomen for any purpose whatever, without the full assurance and approval of an experienced practitioner, and then only after all other tentative, conservative and constitutional measures are faithfully tried, should be held strictly to account for his conduct.—This equally applies to all major operations!"

This *à propos* of the protest recently made by Doctor O'Reilly, who appealed to the Board of Health to suppress the modern laparotomy craze that is now sweeping not only the "Mound City" but the entire State of Missouri. Further, the *Times and Register* asserts the State of Missouri is "the hot-bed of medical anarchy; her once honored and influential State Medical Society, we are informed, has gone to pieces. . . . At the annual meeting this year but seventeen members answered to the roll-call."

***

The foregoing is neither new or strange to those familiar with recent events. Such is the natural outcome in a State that boasts nearly a score of medical schools, sixteen medical journals, and the largest proprietary-medicine interest in the world. Apparently

more than one reform is needed, for with the surroundings it is but natural that the greatest cry and demand for general letting-down of the bars of the professional fold should emanate from the region of which St. Louis is the medical as well as commercial centre.

Worry as a Cause of Cancer.—

Doctor C. H. Blackley, in a very remarkable paper appearing in the *Homœopathic Review*, declares that in all but three cases seen by him during thirty years, cancer was produced by anxiety. His list includes five cases of scirrhus of breast; two of medullary sarcoma of hip-joint; three of uterine scirrhus; five ditto of stomach or bowels, or both; three of medullary cancer of liver; one of mammary scirrhus, followed by encephaloid of liver and colloid of thoracic cavity; two of malignant disease of bones of the lower extremities; one of facial epithelioma; and one of scirrhus of œsophagus.

The fact that very many persons who suffer from misfortune are exempt from cancer, he argues, shows an immunity similar to that which protects the majority from other diseases. Heredity, he believes, has very little influence; in only three of his cases could he trace any family history of malignancy.

Loss to the Eastern Insane Asylum.—

Doctor C. B. Burr, long Superintendent of the Eastern Michigan Asylum, has resigned, to take charge of "Oak Grove Retreat," a private institution for the insane at Flint. He enters upon his new duties September 1st. Doctor E. A. Christian will succeed Doctor Burr at Pontiac.

Honors.—

It is rumored Doctor James Samson, of Windsor, well known to the medical profession of Canada and the Northern States, will have a seat in the next Medical Council of Ontario. The honor will be no less to the Doctor than to the Council.

"Masked Intermittents" and "Yellow Fever."—

THE MEDICAL AGE will shortly publish two papers with the above titles, from the pen of the author of "Pernicious Fever." No doubt they will excite the same interest and command the same attention as the latter.

Items and News.

Facts and Theories.—

Fitting facts to theories is the arduous task of the bacteriologist to-day. But nothing daunts him. The most marked discrepancies but add fuel to the fire of his enthusiasm. Fortunately for medical science, the greater the conflagration the sooner its violence is spent.

Here is a specimen of the reasoning powers of the bacteriological student: Seized with ambition, he proceeds to make a number of experiments with choice cultures of bacteria. After inoculating several animals without result, does he reason that as germs produce no effect upon healthy tissues, they cannot be disease-producing *per se*? Not at all. He either concludes that the animals are naturally(?) immune, or, if he be particularly energetic, sets about overcoming this obstinate resistance. He subjects the objects of his experiments to intense cold, works them until exhausted, starves them, etc., until at length he has brought them to see the error of their way and they succumb to disease.

Then he is ready to make a lengthy report of his labors, and refers to his contribution to medical science with the pride of a seven-year-old boy in his first attempt at kite manufacture, and with less justification. If this same enthusiasm were manifested in a better cause, medicine might reap some rich rewards.—*Medical Brief.*

Rubber-Tissue Gloves for Protecting the Hands during Operations, etc.—

Doctor Morton calls attention to thin rubber gloves for general surgical purposes and for handling strong solutions. He finds them extremely useful in handling offensive cases. In rectal examinations the hands do not become saturated with fœtor, and it is wonderful how many more examinations one makes. Also in handling strong solutions, or even in operating in septic cases, they have an excellent field. The rubber is so very thin that it interferes very little with the tactile sense, and the gloves go on and off with great ease. They are of great value when handling morbid growths or making post-mortems where it is possible to be inoculated, and bear steam sterilization and soaking in strong solutions of carbolic acid or bichloride of mercury.—*Omaha Clinic.*

Fashion in Therapeutics.—

By looking back over the history of drugs —those newly discovered—those used for new purposes—those discarded even after

long use and vaunted efficiency—those reintroduced after having once been dropped, and probably forgotten,—I say, by thus taking stock, as it were, we are enabled better to see our real progress and understand our position at present. It will be a little surprising to see how few drugs have stood the test of time, and how many there have been which flourished for a season. In medicine there is fashion, and some things get to be a fad, and for a while the profession runs wild, till sober second thought is brought to bear; then these die, to be, probably, replaced by something else.—DOCTOR J. R. HILMAN, in *Memphis Medical Monthly.*

Novel Treatment of Fracture.—

Cases of delayed bony union have long been treated by cutting down on the seat of fracture and wiring or screwing the broken parts together. Now Mr. Arbuthnot Lane (*British Medical Journal*) advocates cutting down on every oblique fracture of the leg, exposing the fragments, bringing them into accurate apposition, drilling holes, and fastening by steel screws. He says there is immediate relief of pain by this method, absence of tension and discomfort due to extravasation of blood into the tissues, and shortening of the period of treatment. He asserts this is especially to be recommended in the laboring man, to whom time is money. He does not tell us what becomes of the steel screws.—*Maryland Medical Journal.*

Protection of Boys from Assault.—

Lawson Tait insists that the criminal law should be amended in order to protect boys against being induced by adult women to have sexual intercourse with them. According to Mr. Tait this is by no means a rare offense; "relatively," he says, "I am not sure if it is not as common as its converse." There is no doubt that, while every protection is afforded to the female sex by the Act in question, the male sex are placed at a great disadvantage, not only in the manner pointed out by Mr. Tait, but also in the power which women possess of bringing false charges against men.—*Medical Record.*

Error in Recompense.—

A woman forty-nine years old came to the dispensary, bringing with her a child of five years. She was a widow at nineteen, with five children; since then has had twenty other children at term and two miscarriages, but never twins. Married three times. Out of twenty-five children, nineteen were boys, all died young. The eldest of the five remaining was twenty-eight and pregnant six months. The woman received a medal from the Irbonne Institute, but being in need wished to exchange the honorary for a pecuniary recompense.—*Le Progrès Médical.*

Test of Flour for Diabetics.—

A weighed quantity of the flour is taken, and the carbo-hydrates converted into glucose by treating with sulphuric acid in an inverted condenser for a few hours, and then estimating the amount of glucose by the alkaline copper test. This process with care gives absolutely reliable evidence.—*Lancet* (London).

Dangerous "diabetic flours" containing as high as sixty-six per cent. of starch, and yielding the same amount of glucose as wheaten flours, are to be found in the market.—*Medical Record.*

A Chemical Problem.—

The most common affairs of life have not yet been reduced in practice to a science. Bread-making, for example, is still a black art. You put flour and water and yeast and salt and lard together, and do certain things to it, and then trust to the gods to make it into bread. Sometimes they do and sometimes they don't. Sometimes you have good bread, but more often you don't.—C. H. HENDERSON, in *Popular Science Monthly.*

Prepared.—

Minister: I am so sorry to hear that your poor papa is going to die. Is he prepared for it?

Daughter (weeping): Yes, partially so; he understands the dead languages.—*Dominion Medical Journal.*

The Medical Profession in Fiction.—

Doctors are very poor story-writers, if we judge by some of the trashy tales that have recently appeared in some of the medical journals. Possibly the journals are hard up for material.—*Kansas Medical Journal.*

They All Have It.—

"Madam, your husband is afflicted with appendicitis; but I think he will recover."

"Oh, doctor, I'm so glad. Almost every family on the street has had a case of it, and I was getting positively ashamed."

Antidote to Prussic Acid.—

A Hungarian chemist claims to have discovered a perfect antidote to poisoning by hydrocyanic acid in Cobalt nitrate.

Book Reviews.

A MODERN WIZARD. By Doctor Rodreigues Ottolengui. Paper; square 16mo; pp. 234. Price, 50 cents. G. P. Putnam's Sons, New York.

This is certainly a unique work, in that it deals with the medico-legal aspects of psychology, and incidentally with theosophical theories. As regards the latter the writer is apparently very weak and relies entirely upon the imagination, transcending not only the bounds of teaching, but of probability and possibility. In legal matters he is more at home, at least such appears to be the consensus of opinion among gentlemen of the bar. The medical scope of the work is subject to dual criticism—first, by modern bacterial pathologists, who will perhaps object to the romance that is the privilege of authorship; second, by the more conservative and thinking portion of the profession, as incomparably silly—thus the work is something of a paradox.

Nevertheless it may be said the volume is a remarkable one, especially in the ingenuity of its conception, clearness in plot, and faithfulness to detail; many of the seemingly mysterious effects made prominently apparent are directly traceable to definite causes; and the deft way in which the author leads the reader to easy understanding of abstruse matters, is certainly not the least of its merits. The tale is well worthy of perusal by the profession if for no other reason than to discern the extremes at which modern bacterial pathology aims.

DEMOREST'S FAMILY MAGAZINE. Price, 20 cents; $2.00 a year. W. Jennings Demorest, New York.

In the September number, Henry O. and Theodore A. Havemeyer, Frances Willard, Hamilton W. Mabie, Edward E. Rice, and Senator W. A. Peffer talk entertainingly about their hobbies. "Spongers and Sponging in Florida" is a handsomely illustrated, readable article. "Submarine Lights" should be read by every lover of the sea. "A Day Among the Shakers" is a romantic story accompanied with most exquisite pictures; and the other stories are exceptionally bright and amusing. "Sanitarian" contains a helpful article on "Corpulence Considered as a Disease." "Fans in Decoration" abounds in suggestions that will be appreciated by every housekeeper; and "Summer Guests and their Entertainment" is especially seasonable.

THE CANADIAN MAGAZINE. Price, 25 cents; $2.50 per year. Ontario Publishing Co., Toronto.

In the August number Honorable David Mills writes of "The Missing Link in the Hypothesis of Evolution," E. P. Wells of "McMaster University," John Ferguson of "The Physical Basis of Knowledge," William Wilfred Campbell of "Love's Tragedy at Scratch's Point," John A. Cooper of "Canadian Democracy and Socialism," J. Donald Morrison of "A Case of Mistaken Identity," Hugh Sutherland of "The Hudson Bay Route;" Thomas E. Champion describes "Four Famous Cathedrals," E. T. D. Chambers "Lake St. John and the Saguenay;" Charles Gordon Rogers gives "A Holiday in the Hills;" and Charles T. Long tells of "The Silver Wedding of the Emperor of Japan." The poetry of the number is by Thomas C. Robson, Reginald Gourlay, James A. Tucker, and Charles Gordon Rogers. There are the usual "Gable Ends," etc.

GODEY'S MAGAZINE. Price, 10 cents; $1.00 per year. The Godey Publishing Company, New York.

In all its history of sixty-four years, *Godey's* has never made a more radical or more welcome change than it has in its recent reduction in price to ten cents. The cover of the August number shows that clever and artistic innovations are to be made under the new *régime*. The contents are fully up to the standard. It is all readable, and there is nothing too deep for the summer months. The Seward reminiscences are continued, and there are finely illustrated articles upon New York Roof Gardens, the Battlefield of Waterloo in 1894, and the Yale-Harvard Boat Race of 1894. A long list of fiction and the Fashion Department complete the number.

THE DELINEATOR. Price, 15 cents; $1.00 a year. The Butterick Publishing Co., New York.

The August number is the strongest issue of this popular magazine that has yet come to hand. The display of styles is unusually large and attractive, and is the first authentic representation of the autumn modes; and there is besides a special illustrated article on "Clothing the Baby." A most interesting contribution is the plea for and against granting suffrage to women, by such well known writers as L. G. Runkle and Edith Thomas and there is also a valuable paper on "Public School Teaching as an Employment for Women."

LITTELL'S LIVING AGE.—A statement is going the rounds of the papers, in an obituary of Mr. T. H. Carter, that "with Mr. Littell as editor he brought out the *Living Age*."

Mr. Littell, as editor and proprietor, employed Mr. Carter to *print* the *Living Age*, and also, for a short time, to *publish* it. But the implication in the above quotation that the *Living Age* owes its existence to Mr. Carter, any more than to the papermaker, compositor, stereotyper or binder, is entirely without foundation.

Therapeutic Brevities.

Cascara for the Elimination of Uric Acid.—It seems to be the accepted opinion that the pathology of uric acid is more a matter of defective elimination than of excessive formation. Osler says that "certain symptoms arise in connection with defective food or tissue metabolism, more particularly of the nitrogenous elements. This faulty metabolism, if long continued, may lead to gout, with uratic deposits in the joints, acute inflammations, and arterial and renal disease."

Not getting the desired results from simply stopping the apparent excess by the use of substances claiming to effectually remove uric-acid excess, I questioned the commonly accepted theories, and was finally led to adopt an entirely different line of treatment. This was done by dropping all the so-called antilithics, and relying simply and solely upon a single remedy—Cascara sagrada. Repeated trials convinced me that the faulty metabolism is more quickly remedied with this drug alone than with any other or any combination.

Mrs. G——, aged fifty-five, had for years been subject to uric-acid storms, the usual remedies being of no avail. Having exhausted these, I began the exhibition of the aromatic fluid extract of Cascara sagrada, made by Parke, Davis & Co., in ten- to fifteen-drop doses, two or three times a day as demanded, finally settling on one single dose at the close of the day.—Active catharsis was not aimed at, but a gentle laxative effect was constantly maintained for a prolonged period. The effect was not at once apparent, but within two weeks there was marked amelioration of the aggravated symptoms, and in four weeks' time the swollen joints had almost resumed a normal appearance, the soreness having nearly disappeared. At this writing (two months having elapsed), there is no complaint whatever, but the remedy is continued. No change was made in the diet, as I desired to more fully test the remedy, and am fully satisfied that the good results were due solely to the Cascara. I may add that I have tried other brands of Cascara, but they have not been satisfactory, hence I have come to regard the fluid extract above alluded to as the only one upon which I could confidently rely; it never fails, hence my preference for it.

This drug is an invaluable intestinal tonic in chronic constipation, and other disorders of digestion, but the dose must be regulated to suit the case—ten to twenty-five drops, once, twice, or three times a day, given in water or milk, either hot or cold, as may seem best; I prefer the hot diluent. I also find it is better to give it about an hour before meals, or at bedtime. The fluid extract as now prepared is very palatable, being entirely devoid of the old-time bitterness so characteristic of many preparations of Cascara. I have also found it difficult, at times, to get the article prescribed, hence frequently purchase it at the wholesale house and dispense it myself. In this way there can be no substitution.—DOCTOR W. H. WALLING, in *Medical and Surgical Reporter.*

Untoward Effects of Iodoform.—On the skin, in single cases acne and purpura have been noticed after its internal use. Cutaneous symptoms are frequent, and are chiefly more or less limited to local dermatitis, though it may also be general and not due to local contact; this may be either eczematous, vesicular, pustular, impetiginous or erysipelatous, and often accompanied by high fever. In other cases there may be extensive erythematous eruptions with formation of bullæ or purpural patches, as well as urticaria and papules—intense itching may last for several weeks. Conjunctivitis, changes in the pupils, strabismus, and transient amblyopia, are sometimes reported. Among the nervous symptoms are psychic changes, which either exist alone or are the forerunners of more severe mental affections; in the majority these assume the form of melancholias, with anxiety, uneasiness of mind, inclination to tearfulness, suicidal mania, and restlessness, very often alternated with periods of excitation; or may be associated with vertigo, headache, elevation of temperature, sleeplessness, and small and rapid pulse—the pulse may, without disturbance of the general health, run up so as to become uncountable, while the temperature remains normal, yet the latter is liable to rise several degrees over the normal and remain there for several days without the patient feeling ill. The increase of pulse without accompanying fever is a dangerous symptom in elderly people. Melancholia, which is the chief symptom of the cerebral action of the antiseptic, when it has once appeared persists, and is accompanied by hallucinations, visions, and illusions, delirium of persecution and attempts at suicide—such patients, as a rule, at night, and even during the day, suddenly jump from their beds, try to spring from the windows, to run away or throw themselves into the water; attempt to tear off bandages, destroy the bed-clothes; talk confusedly, stamp the feet, rage, and do not recognize surround-

ings; this condition may last from a few hours to a few days, and pass over into a morose and tearful state, which soon ends in recovery. They remember nothing of the attack. This is a typical attack of transitory melancholia. In some cases the depression increases in intensity, and complete melancholic stupor develops, with refusal to take food, and rapid death. Seizures of anxious excitement and confusion, choreiform attacks, loss of appetite, and vomiting, have also been remarked. In men and animals poisoned with iodoform no alterations are found in the brain and its membranes, but fatty or parenchymatous degeneration of the heart muscle, liver, and kidneys.—PROFESSOR LEWIN, in *Hospitals-Tidende.*

Radical Cure of Fistula in Ano.—In the *American Medico-Surgical Bulletin*, Doctor Goelet declares he obtains the best results by carefully uniting the raw surfaces, first introducing continuous buried catgut sutures in the deeper structures, including the muscles, and separate and interrupted sutures of chromicized gut for the mucous membrane and perineum. Emphasis is placed upon the importance of previous division of the sphincter, strict asepsis, thorough curetting of all fistulous tracts, the use of buried sutures for uniting the deeper structures, and separate superficial sutures in the mucous membrane only, with inactivity of the bowels for five days following the operation.

In favor of this method, as against the introduction of sutures through the mucous membrane of the rectum to include the deeper structures, is the avoidance of danger of infection by leakage, as well as of obstruction of the circulation and consequent œdema that would interfere with primary union.

Strophanthus.—This drug is both valuable and safe. It is a cardiac tonic, a diuretic, quickly relieves præcordial pain and dyspnœa. The tincture is the best preparation, and should be given in small (two minims) doses, gradually increased and combined with stimulants and antispasmodics, such as ammonia and ether. It is most useful in aortic regurgitation, as its power of lengthening diastole is not so great as that of digitalis, nor has it so marked a cumulative action; and any danger which may lurk in its administration is considerably lessened by its combination with ether.—DOCTOR TAYLOR, in *Medical Record.*

Bichromate of Potash in Gastric Diseases.—Doctor James R. Fraser, of the University of Edinburgh, insists that bichromate of Potash in doses of from five milligrammes to one centigramme thrice daily before eating (or when the stomach is as empty as possible) is capable of mitigating the entire tableau of symptoms presented by dyspepsia, and especially nausea, vomiting, and sensitiveness of the epigastrium to pressure. In several cases of acute chronic gastric ulcer with hæmoptysis, however, the hæmorrhage was not checked, and the result was unsatisfactory.

Treatment of Pruritus Ani.—Doctor A. Berger recommends for the immediate relief of itching and rapid disappearance of eczema of the perineum and scrotum: A cotton pledget, about two or three centimeters in length and steeped in a two-per-cent. solution of hypochlorate of lime, introduced into the anus, and allowed to remain until there is a slightly smarting sensation, when it is immediately withdrawn and the anal region washed with the same solution, taking care not to wipe it off afterwards.—*Dominion Medical Monthly.*

A Pill for Anæmia.—Professor Edlefsen recommends the following:

℞ Iron by hydrogen, } ää 3 jss.
Powdered camphor, }
Extract gentian, grains cxxxv.
Mucilage gum Arabic, q. s.

Make ninety pills. Dose: Two or three thrice daily.

These are of value both in anæmia and in chlorosis, especially when accompanied by cardiac disturbances such as weakness and irregularity of the pulse.—*La Semaine Médicale.*

Action of Purgatives.—Salines operate in three or four hours:

Croton oil in one or two hours:

Jalap, gamboge, and senna in three or four hours:

Rhubarb and castor oil in from four to six hours:

Aloes and podophyllum in from ten to fourteen hours.—*Louisville Medical Monthly.*

[All cathartics act quicker when taken on a comparatively empty stomach.—ED.]

Pokeberries.—Phytolacca is a most valuable remedy in acute articular rheumatism. The tincture taken in teaspoonful dose every two or three hours will cut short the disease in less time than any remedy I have used. A tincture of the root, moreover, is almost a specific in conjunctivitis and in mastitis.—DOCTOR THOMAS HILL, before the North Carolina Medical Society.

Hydrastinine Muriate in Epilepsy.—On account of the anti-convulsive action of this drug on animals, Doctor Kisselew administered it in watery solution in dose of one-sixth to one-quarter grain five times daily, in epilepsy. In all he gave to four patients, in two of whom the result was negative, while in the other two, after three weeks of treatment, there was remarkable diminution both in the intensity and frequency of the attacks. —*Le Mercredi Médical.*

For Asthma.—

℞ Chloroformi, f 3 j.
Ætheris, f ʒ jss.
Syr. acaciæ, f 3 j.
Tinct. cardamom. co., f ʒ j.

M. S.: A teaspoonful every half-hour until relief is obtained.

—*L'Union Médicale.*

For Eczema.—

℞ Salicylic acid, 3 j.
Zinc oxide, 3 iij.
Powdered starch, 3 iv.
Wool-fat cerate, ʒ j.

Make ointment, and apply.

—*The Practitioner* (London).

Eau de Quinine.—

℞ Quinine muriate, 1 gramme.
Tincture cantharides, 10 grammes.
Glycerin, 75 grammes.
Alcohol, 500 grammes.
Tincture of rhatany, 20 grammes.
Spirit of lavender, 50 grammes.

Mix.

For Removal of Freckles.—

℞ White precipitate, Subnitrate of bismuth, } ää ʒ j.
Glycerin ointment, ʒ ss.

M. Apply every other day.

—*American Doctor.*

Otorrhœa.—Doctor E. C. House, in the *Homœopathic Recorder*, writes of the relief of a case of chronic otorrhœa accompanied by terrible itching and eczema of the canal and internal ear, by the use of mullein oil alone. The treatment extended over two months.

Epistaxis.—Jonathan Hutchinson recommends placing the patient with obstinate nose-bleed in the sitting posture with feet in a deep pail of water as hot as can be borne. He says this never fails to arrest the hæmorrhage.—*Medical Record.*

For Gray Hair.—The persistent use of phosphorized Cod-liver Oil will in some cases restore gray hair to its original color, and will prevent it from turning gray.—*Medical Times.*

Medical Progress.

THE LATE PROFESSOR BROWN-SÉQUARD.—Doctor Brown-Séquard occupied the chair of Physiology in the Medical College of Virginia in 1854. At that time he was incapable of lecturing in English, but his most beautiful demonstrations were patent; probably for the former reason he was retained only one session. The school of the French physiologists was then at its zenith, and we owe more physiological knowledge to them than to all the world besides. Bernard was first and Brown-Séquard second in fame.

Brown-Séquard's ardor for vivisection was unbounded, and many laughable scenes were the consequence. On one occasion his assistant for some reason let go the cat, which immediately vaulted to the devoted head of the professor, "snatching him bald-headed," and clawing his face, getting the first blood. But the man who would stand before the class and let down pieces of sponge into his stomach, like one fishing for crabs, could not be deterred by such a trivial matter. Accordingly, albeit his wig was off, he rushed around the room and over the benches after grimalkin, finally caught her, and most conclusively demonstrated to the convulsed class that a section of the cat close to the medulla oblongata produces first convulsions and then death.

The basement of that graceful Egyptian pile, the college, presented the appearance of a bench show. The guinea-pig, the favorite of the French physiologist, was not present.

The epileptic owe an everlasting debt of gratitude to this famous *savant*, for there is nothing so efficacious in epilepsy as the bromides; chloral is a superior remedy for exclusively nocturnal epilepsy. He taught that there is "a positive relation between the intensity of the bromide eruption and the efficacy of the remedy."

Brown-Séquard, with other physiologists, established the fact that the fibrin of the blood disappears while passing through the liver and kidneys. But for this fact the blood would coagulate in the vessels.

He gave a valuable point in hypodermatic medication. The best time to give a subdermic injection is when the patient is fasting; less medicine is required, and the effect is greater.

His work regarding the spinal cord is known to every tyro in physiology.

These are but a few things which this honorable gentleman did. But, alas! some men live too long and impair their fame. His "elixir" was probably the outcome of senility

for he was seventy years of age when he announced the ignoble extract. He fancied that after he had received an injection of it into his loins he could run up and down stairs like a boy, and that it also enabled him to do more and better mental work without fatigue.

Unfortunately he gave the cue to younger men in our country, who should know better, and they have made extracts from nearly every organ in the body of the sheep or calf. But, unlike the great and honest experimentor, they, presumably, follow in the wake of the alchemist—they would turn these baser elements into gold. Their products are supposed to act upon the principle of the ancient doctrine of signatures, as lungwort and liverwort; or upon the principle that in order to learn or read a language it is only necessary to swallow the alphabet. The humbuggery of such therapeutics was long since proved by a paraplegic patient, who confided to me that he had been drinking his own urine in the hope that his system would reappropriate the mucus.—Doctor Thomas R. Evans, in the *Medical Record.*

The Medical Care of Children.—In the treatment of children *observation* must be the chief reliance. The complexion may be clear and delicately tinted, though pallid, as in the tubercular. If cyanosed, it suggests a respiratory cause; a leaden or earthy tint, especially with great pallor about the upper lip, will frequently be found with gastro-intestinal trouble; the swarthy (*café au lait*), though pallid, should put one on guard for syphilis; in the spasmodic stage of whooping-cough the face becomes swollen, often ecchymosed, the eyelids puffy, the conjunctiva congested and bloodshot; sunken, vacant eyes, with dark areola around them, indicate great collapse.

The expression of the face will not infrequently indicate even the seat of disease—so much so that Jadelot pointed out the following in the infant which, by position, indicate the seat of derangement: The oculo-zygomatic line, from the inner canthus of eye downward and outward to the cheek, a little below the malar eminence, points to derangement of the brain and nervous system. The nasal line, from the upper part of the *ala nasi*, curving downward and outward around the corner of the mouth, is said never to be absent in gastro-intestinal derangement. The labial line, beginning at the angle of the mouth and running downward and outward, generally accompanied by rapidly moving nares, is a fairly trustworthy sign of disease of the lungs and air-passages.

The child's attitude should also engage attention. A healthy infant lies with limbs semiflexed, and, if on his back, inclines one cheek to rest on the pillow. When the limbs and trunk are rigidly stretched out, tetanus is suggested; when unconscious, or in great weakness and prostration, the child will be found lying flaccid on his back, with face to ceiling. If found on his side, curled up and with head retracted, a frown will probably be seen, together with the oculo-zygomatic line, suggesting cerebral irritation, or spinal irritation if there is opisthotonos. If there is intolerance of light, as in cerebral irritation, the face will be buried in the bedclothes. In abdominal discomfort or in rickets, the child persistently lies on his face, or even rests on elbows and knees.

As regards the cry, some information may also be gained here. Sharp, violent fits of crying, with vigorous movements of the legs, usually indicate colic; the sudden, sharp, single, piercing cry uttered at intervals, while the patient lies in a stupid, drowsy, semiconscious state, is but too suggestive of meningitis; while the hoarse, grating cry of syphilis is characteristic. In contrast to these, note when the child does not cry, as in profound weakness brought on by diarrhœa, and in grave pulmonary affections where the breath is too precious.

Lastly, note both suction and deglutition. Dyspnœa and acute fever cause suction to be performed in short snatches; syphilis also necessitates pauses for breathing. In thrush or ulceration, suction and deglutition are evidently performed with great pain; if the throat is sore, there is frequent cough and noise in deglutition. In great prostration, if the child swallow at all, it is a hopeful sign —*Dublin Journal of Medical Science.*

Abscess.—Never try fluctuation across a limb, but always along it.

Abscesses near a large joint often communicate with the joint. Those near a large artery sometimes communicate with the artery. Abdominal-wall abscesses sometimes communicate with the gut or the solid viscera

Never forget that early openings are imperative in abscesses situated in the neighborhood of joints; in the abdominal wall; in the neck, under the deep fascia; in the palm of the hand; beneath periosteum, about the rectum, prostate, and urethra. To wait for abscesses to "point" or to "burst" in these situations is culpable as well as cowardly.

Remember the frequency with which hæmatomata and traumatic aneurysm have been mistaken for abscesses, and incised with

untoward results. Therefore do not open an abscess anywhere near a large artery without first using a stethoscope, and then only by Hilton's method (*i.e.*, scalpel, director, and dressing-forceps).

Never plunge in incising abscesses, and never squeeze the sac after opening. Do not forget that your incision should radiate in abscesses pointing near the nipple, in abscesses near the anus, and in scarifying the chemosis of the cornea; and that your incision should be longitudinal in the hand, in the urethra, and on the vertex.

Do not forget that incisions for abscesses in neck and face should run parallel with the wrinkles and folds.

Do not be afraid of injuring the lacteal tubes in mammary abscess; more harm is done to the gland by the enlargement of the walls of the phlegmon than by free incision.

Never make a palmar incision except in the middle of the lower third and in the axial ine of the fingers or at the sides of the palm.

Do not forget, in opening a deep abscess in the lumbar region without manifest projection, to cut down opposite a transverse process, not between the processes, lest you wound a lumbar artery.—Doctor Fenwick, in the *Atlanta Medical and Surgical Journal.*

Salivation of Pregnancy.—The woman came under observation in her twenty-seventh year, during her first pregnancy; general health good. She had not suffered from nausea and vomiting, but began early to be troubled with salivation, which gradually increased in severity until it became especially disturbing at night. Finally the flow became so profuse she was unable to lie down for fear of choking, and sat bolstered up in bed. The submaxillary glands were markedly enlarged, and the contour of the face thereby distorted; the urine was markedly diminished. Labor was terminated by forceps. During the three subsequent days salivation occurred two or three times, but the flow lasted only for a few moments, and after lactation had been fully established it did not return.

Two years later the patient again became pregnant, and at the end of the second month salivation occurred as before, but without morning sickness. By the fifth month the flow had become so excessive as to cause great discomfort and loss of sleep, though, as before, the general health remained good. Labor was again terminated by forceps; and lactation was established on the second day, though salivation more or less profuse continued two weeks longer, and then gradually diminished for a month, but did not entirely subside for three months.—Doctor J. Orne Green, in *Boston Medical and Surgical Journal.*

An Endemic of Hysteria.—In a little village, Schwanheim, near Frankfort-on-Main, occurred an epidemic of hysteria lately, causing considerable consternation and excitement among the citizens. Two young girls awoke one morning and found that their hair had been cut close to the scalp. They related that a person had come into their room during the night and cut their hair. Several girls experienced the same thing, and finally a young woman, who was to be married the next day, lost her hair. Some of the citizens volunteered to watch over the houses of young women; these were informed through anonymous letters that their whiskers would be cut. On the door of one of the public buildings was found the following inscription:

Wir sind unser dreissig,
Bei Nacht sind wir fleissig,
Bei Tag schauen wir zum Fenster Ninaus
Und lachen die Leut' aus;
Jetst schneiden wir Zöpf ab,
Später schneiden wir Köpf ab.

It was later explained, of course, that the hair had been cut by the girls themselves.—*Ugeskrift for Læger.*

[Pretty much the same happened in Detroit about three years ago.—Ed.]

Castration with Avulsion of the Vas Deferens.—Doctor Büngner reported to the Association of German Scientists and Physicians a case of tuberculosis of the epididymis in which after castration by the ordinary method a recurrence took place in the spermatic cord, although this structure had shown no signs of disease during the operation.

After isolating the vas deferens from other structures he was able to unfold almost the entire vas by the exercise of uniform tension, and when it tore off he had about four-fifths of it in the hand. The microscopic examination of the torn-off portion revealed tuberculosis of the portion situated in the scrotum.

Doctor Büngner has determined by examination of cadavers that the vas deferens in the newborn measures about fifteen centimeters in length, at the age of fifteen years about twenty-five centimeters, and in adults about fifty centimeters. He always found it possible to remove four fifths by avulsion, attention being paid to careful isolation. Clinical experience with this operation was obtained in seven cases of tuberculosis of the testicle and epididymis.—*Münchener Medicinische Wochenschrift.*

The Medical Age.

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Original Articles.

PERNICIOUS FEVER.*

BY DR. JOAO VINCENTE TORRES HOMEM.†

(*Continued from page 493.*)

XIX.—The course of pernicious fever, whatever be its form, is characterized by rapid evolution of the morbid phenomena, which go headlong to a fatal termination, or retrograde with the same rapidity and are replaced in a few days by convalescence. Thus, as a person in the enjoyment of perfect health being attacked by a fatal pernicious paroxysm, dies in a few hours, so also is it very common to see a person, in danger of his life under the influence of a very grave pernicious attack, entirely safe next day. Some of the cases I have reported fully demonstrate the reality of both the one and the other fact. — There is no physician who has not verified for himself the truth of this assertion. Pernicious fever, then, is a disease of essentially rapid course; in a few days, and at times in a few hours, the question of the patient's life or death will be decided; to-day the gravity of the paroxysm carries him to the brink of the grave; to-morrow he may be found in so flattering a condition as to authorize the physician to promise a speedy recovery.

If there are cases of pernicious fever in which the patient has been attacked previously by paroxysms of simple, well marked or masked intermittent, there are also cases, unhappily numerous, in which it is the pernicious attack that opens the scene, where the subject, in the enjoyment of the most flourishing health, is treacherously assailed by the terrible enemy without the least signal to warn of the enormous peril awaiting him. Still more, cases are not rare in Rio de Janeiro of rapid deaths caused by pernicious attacks, which appear suddenly and smite down their victims in a few hours. At certain seasons of the year, during the hotter months, instances of this sort are observed somewhat frequently, particularly if the sewerage, gas and water companies happen to be making deep and extensive excavations in the more central streets of the city. Then, the immense laboratories of telluric miasmata prepared, and receiving from solar rays and showers the elements necessary to their maximum activity, take charge of the poisoning of the population, which always pays them a heavy tribute.

It is very rare for a patient to have more than three pernicious attacks. He ordinarily yields to the third, when medication has become powerless. If he has not taken the appropriate remedies, or if these have not been energetically given, the fatal termination takes place in the second paroxysm. In some forms, especially the comatose and algid, the second attack is almost always mortal. Hence is deducible the important practical precept of resorting to therapeutic means with the greatest possible promptness and vigor in every case of pernicious fever. With the exception of the young candidate for a degree who died after having had six pernicious paroxysms, I have never observed in any patient a greater number of attacks than three.

In virtue of the rapid course of pernicious fever, patients, when they recover, pass through a very mild and brief stage of convalescence.

XX. The pathological anatomy of pernicious fever comprises two parts: One invariable, referable to the basis of the disease,

*A clinical study of the fevers of Rio de Janeiro —translated by Surgeon George P. Bradley, United States Navy, and read before the Association of Military Surgeons of the United States, session of 1894.

†Lente de clinica medica da faculdade do Rio de Janeiro, membro titular da Academia imperial de medicina, membro correspondente da Academia Real das sciencias de Lisboa, Rio de Janeiro, 1877.

which is itself invariable; the other extremely variable, referable to the great variety of forms which the disease assumes.

In many cases, especially in the graver, in those where the first paroxysm kills the patient and kills him in a few hours, pathological anatomy tells us nothing which can explain the fact of the fatal termination—still less the sudden and rapid manner in which it occurs. It is in these cases, where there has been no time for the organs to suffer appreciable changes, that there may be some support to the opinion of the vitalists, who believe that death supervenes in consequence of the profound *sideration* which annihilates the vital force. As a general rule, the shorter the duration of the disease and the less the number of paroxysms, so much the less change do the organs present after death, especially those which were the seat of the phenomena of perniciousness during life. From the absence of post-mortem lesions which might explain death, particularly when it has surprised a person in good health, physicians conclude it to have been a case of pernicious fever; thus think the best practitioners of Rio de Janeiro.

The invariable lesions of pernicious fever —which are only wanting when a single paroxysm has killed the patient in a few hours —are congestion of the liver and spleen. With us, as already said and demonstrated by cases, the former of these organs receives the influence of malaria with much more frequency and intensity than the latter, especially in the acute stage of the disease. Both during life from the very commencement of the disease, and after death where the paroxysms have been prolonged some days, the liver is much more compromised than the spleen. On autopsy the former is found enlarged, turgid with blood, of a very deep red color, very heavy, with its parenchyma very dense, compact, and hardened. In some of the gravest cases, where a violent paroxysm smites the system and extinguishes life, the flow of blood to the liver is so violent that the vessels are ruptured and a hæmorrhage occurs with its centre in the interior of the organ.—This fact, although reported by some foreign physicians, is still very rare, especially with us; I have never observed it, nor do I know that any colleague has done so.

The spleen is sometimes the seat of a more or less pronounced congestion, but it never attains the size it ordinarily presents in malarial cachexia, save when the pernicious paroxysm occurs after simple intermittent attacks of old date. There is one very common phenomenon in this organ observed in the majority of cases, even when it is not sensibly enlarged, namely, softening—friability of the splenic pulp so that it breaks down easily under the slightest traction. Some pyretologists cite instances of hæmorrhagic effusions breaking down to a great extent the parenchyma of the spleen during a quickly fatal pernicious paroxysm. When I was a student of medicine, in 1858, I had occasion to observe a case of this sort in the woman's ward of Nossa Senhora de Conceiçâo, where the Baron de Petropolis, my revered master and predecessor, was holding the official course in the last two months of the academic year.

According to the form assumed by the pernicious paroxysms, appear the various lesions revealed by autopsy. In the comatose, and especially in the cerebro-meningeal forms, hyperæmia of the brain and membranes is met with, more or less patent according to the intensity and duration of the disease; in the pneumonic form are noted the phenomena of pulmonary congestion or hepatization. In the other forms I have described, the necropsy almost always remains mute, excepting in the dysenteric, where may be manifest the intestinal changes proper to common dysentery.

The general rule in the pathological anatomy of pernicious fever is the existence of congestion of the liver, and at times of the spleen—great increase in the size of the former organ, diffluence and friability of the parenchyma of the latter,—and absence of any lesion in the other viscera, even in those which seem to suffer most during the paroxysms. This is what is observed in Rio de Janeiro, and what I have often observed in the autopsy-room, which receives the bodies of patients dying in the hospital wards. From this negative element, springing from pathological anatomy, the physician derives great benefit in the post-mortem diagnosis.

In 1861 a negro slave was convalescent from a lymphatitis of the scrotum, in the

Santa Izabel ward. The Baron de Petropolis was waiting for him to become stronger and discharge him, and had put him on the *Agua Ingleza* solely. One morning, at the visiting-hour, the illustrious Professor was told that the negro was dead; yet the evening before, he was walking about in the hospital corridors and in excellent condition. What could have been the cause of death? Was it rupture of an internal aneurysm which had passed unnoticed? Was it a *foudroyant* stroke of apoplexy? Such were the conjectures made by the Professor, by myself (then holding the post of *chef de clinique*), by the interne, and by other students, surprised by the unexpected news. The autopsy was performed by me with all minuteness, aided by the two internes and two other distinguished pupils, in the presence of the Baron de Petropolis, and revealed nothing that could serve as a pretext, much less a cause, to explain death. Without any doubt, said the learned master to the pupils surrounding him, our patient died of a pernicious paroxysm. Later on a patient near him reported to us that he had complained of being very cold at ten o'clock at night, and had pulled up the blankets to cover himself without uttering another word.

XXI. The diagnosis of a pernicious fever is either very easy or extremely difficult. When the pernicious paroxysm is immediately preceded by simple intermittent paroxysms; when the physician knows that the patient resides or has been for some time in a marshy locality; when the persons about him can furnish minute and precise information; the diagnosis does not meet with the slightest difficulty. But if the patient be found alone, with intellectual faculties abolished or profoundly disturbed; if the practitioner be ignorant of his residence; if the pernicious attack has surprised him in the enjoyment of perfect health; and if the form assumed by the disease has many or some points of similarity to one of the affections known and classified in the nosological tables; the difficulties with which one strives in order to form an exact judgment of the nature of the disease, are of such an order that he will often wander from the path of truth, unless he calls to his aid all his perspicacity, attention, learning, and experience. It is in this difficult and harassing situation that the true practitioner is revealed in all the fullness of his real worth. He cannot adjourn his decision till later; he cannot wait for one symptom more; he cannot appeal to the further progress of the disease; he cannot set up a symptomatic treatment to cover up his responsibility and ease his conscience; but it is incumbent on him to decide promptly, for any delay may be fatal to the patient; time presses, and must be availed of to the benefit of a life, often precious, which is about to be extinguished, and which may be disputed to advantage by the use of a certain remedy. This remedy will be administered immediately and with due energy if the diagnosis be fixed at once, and the patient may be saved; otherwise it will be set aside, and death will soon count one triumph more.

The diseases are rare of which the treatment is so directly deducible from the diagnosis as in pernicious fever; and they are very rare that show, like this, the value of medicine and the scientific importance of the physician. Under the influence of a pernicious attack a patient is to-day at the edge of the tomb! But after taking large doses of quinine he rapidly improves, to-morrow considers himself safe, and in a few days regains his former health.

If sometimes the physician cannot decide with certainty whether he has to combat a pernicious fever or another affection independent of malarial poisoning, and in this doubt employs the salts of quinine as a means of prudence and precaution, there are also cases where the diagnostic judgment ought to meet with no difficulty, especially with the practitioner in hot climates, in countries where malarial emanations prevail, or in cities like Rio de Janeiro where pernicious fevers are so common and assume the most varied forms.

According to some old authors, among them Torti, three signs characterize a pernicious paroxysm: First, the condition of the pulse, which expresses the condition of the radical forces of the system: Second, the condition of the urine: Third, the paroxysmal succession of the symptoms. In the actual state of practical medicine these three signs have completely lost the importance assigned them, and we should greatly err in the diagnosis of a pernicious attack had we no other

sources of instruction. As everyone knows, it is not always that the condition of the pulse betrays the condition of the forces of the animal economy, especially at the beginning of a disease. Clinical observation protests daily against the exaggerated opinion of Torti, who asserts that the pulse in pernicious fevers is always weak, small, and compressible, except in paroxysms of comatose form, when it is bounding, hard, and full.

Still less than the state of the pulse can the condition of the urine serve as a diagnostic sign of pernicious fever. Even setting aside the cases—very frequent, however—where during the pernicious attack there is a suppression of urine, the presence in the fluid of abundant reddish sediment, far from deserving importance as the ancients thought, has been observed in many acute febrile diseases, especially after the frequency of pulse has ceased and the temperature has become normal; the amount of sediment is usually in direct proportion to the duration and intensity of the fever. Genuine ashes of organic combustion, the phosphates, urates and chlorides of which the reddish urinary sediment is in great part composed, indicate nothing more than the greater or less degree of interstitial disintegration of tissue during the febrile paroxysm, whatever may have been its nature, simple or pernicious, idiopathic or symptomatic.

As to the third sign of Torti—the periodicity of the phenomena,—although it may merit great importance in the diagnosis of a pernicious attack, it is not always present, since, as is generally known, pernicious fever assumes sometimes the remittent and at others the continued type.

In difficult cases, given the unfavorable circumstances I have pointed out, the physician, after well examining his patient, will find in him five signs to indicate that it is a pernicious paroxysm. These signs, the first four of which I presented to my pupils in 1867, and which were published, together with a lecture I gave on pernicious fever, in No. 1 of the *Revista do Atheneo Medico*, are very rarely lacking—at least the majority of them; they are the following:

First: The rapidity with which the symptoms develop and acquire their maximum intensity:

Second: The singular want of harmony noted in the symptoms, the unusual manner of their grouping, such that they can be referred to no fixed disease:

Third: The gravity of the symptom or symptoms denoting perniciousness:

Fourth: The rapid enlargement of the liver, and sometimes of the spleen as well:

Fifth: The splenic pain, really a splenalgia, which appears independent of the enlargement of the spleen, and is revealed when the left hypochondrium is compressed beneath the last rib.—This last sign was not appreciated by me until after Doctor Duboue had called the attention of the readers of his book upon malaria to it.

Of all these signs, the first, second and fourth are the most constant and important; the fifth is often wanting, but when it appears is also of great value.

Whenever the slightest doubt arises in the physician's mind of the existence of a pernicious paroxysm, he ought to prescribe for the patient a full dose of quinine, inasmuch as it is to be preferred that this drug should be useless, or even a little harmful, in case it is not indicated, rather than that it should fail to be employed in a case of pernicious fever.—On the first hypothesis, no serious inconvenience will be caused by the practitioner's over-caution; in the second, the patient's death will be the result of his neglect. In the benefit obtained in a short time from the salts of quinine, the physician will furthermore find an element of diagnosis not to be despised. Encouraged by these advantages, and more assured in his judgment, he will pursue the same treatment, and avoid with the greatest care the recurrence of the paroxysm; if he has ill success, if the progress of the disease convinces him of the uselessness or harmfulness of the treatment he employs, he will always have time to change his course and correct any inconvenience it may have chanced to give rise to.

XXII. Pernicious fever is always a very grave affection; the algid, cardialgic, choleraic, syncopal, and comatose forms are those which assume the highest gravity. The greater the number of simple intermittent attacks preceding a pernicious one, the graver becomes this latter; when, especially, these

simple paroxysms have been rebellious to the salts of quinine, we should suspect that the specific treatment will be fruitless to combat the pernicious paroxysm also, and to prevent the next attack, which, if at times it fails to be fatal, is always very serious.

The salts of quinine fail to produce the desired effect in cases where the malarial poison has struck deep root in the system; and then we either see simple periodical paroxysms last a long time, and only disappear on the patients changing their climate, as is frequently observed; or, if the paroxysms are pernicious, they recur, and the sufferers die in the second or third. The prognosis of pernicious fever should then be so much the graver as the number of paroxysms is larger, the longer the patient is from his first one, and the greater the doses of quinine employed with no benefit.

XXIII. In the treatment of pernicious fever, the physician should attend at once to the basis and to the form of the disease. In presence of a paroxysm, he should employ all the means within his reach to prevent the following paroxysm or to modify its gravity. It is incumbent on him to lose no time and to work vigorously; the patient's life depends on the promptness and energy of the treatment; the smallest delay, and weak medication, are always prejudicial.

The only means that can efficiently combat the basis of the disease are the salts of quinine, given without loss of time and under such circumstances as to be promptly absorbed. There are cases in which the physician recoils a little to advance further; he resorts to certain preliminary means, which remove the causes generally recognized as obstacles to the absorption of the salts of quinine, and then he employs these salts afterwards.

What has been said in relation to other pyrexias is entirely applicable to pernicious fever. To disengorge a very congested viscus, whether it be the brain, lung, or liver; to unload the alimentary canal, overcharged with mucus, bile, or alimentary residua; to abate the exaggerated febrile heat; to promote some perspiration when the skin is very hot and dry—all are often, if not always, indications which should be previously fulfilled, for on these depends the efficiency of the principal treatment, the prompt absorption of the salts of quinine. Still there are cases so urgent, so imminent, which threaten life so seriously, which may terminate fatally in a few hours, that not a moment can be or should be lost.

To give quinine in solution; to give it in doses thrice larger than in a simple fever; to administer these large doses at various hours of the day; not to wait for apyrexia nor any other occasion after fulfilling the preliminary indications,—all are precepts which I invariably follow in the treatment of pernicious fever, so far as possible. In the gravest cases, where it has been little used, it is best rather to sin by prodigality than by parsimony in the doses of the remedy, for it is impossible to know what is a sufficient dose to combat the miasmatic infection and prevent the next paroxysm. No serious result can come from our prodigality—the gravest symptoms of cinchonism yield in a few days to alcoholics, diffusible stimulants, and opium; while on the other hand the patient's death may be the consequence of our parsimony. It is for this reason that, whenever I meet with a case of the highest gravity, I do not hesitate to saturate the patient with quinine, even to poison him with this substance, that the therapeutic poisoning, which can be easily cured, may replace in the system the malarial poisoning which may kill in a few hours. Of this mode of procedure of mine, and of the benefits I have obtained with it, some of the cases which figure in this paper give very significant proofs. The patient who had an aphasic pernicious attack, and who was in the hospital wards in 1867, to whom I have already referred, took in five days 198 grains of quinine (twelve grammes) without having had any accident, excepting some deafness which lasted hardly a week. At the time of my taking up this case in a lecture, which was published, as already stated, I referred the students to a case in my private practice, where a girl of nine or ten years, residing in the Rua do Bom Jardim, attacked by a second comatose pernicious paroxysm, took during a week 204 grains of quinine in decreasing doses (little less than thirteen grammes), deafness resulted which lasted two months.

In the *Annuario de Clinica* of 1868, is reported the case of a patient in the Santa Iza-

bel ward, who, having had three progressively graver comatose pernicious attacks, took in twelve hours a mixture containing eight grammes of quinine. These three patients, who took the largest doses of quinine I have ever given, recovered completely; the same happened with the nephew of Doctors Sebastian Saldanha da Gama and Benjamin Franklin Ramiz Galvao, the abstract of whose case figures in this work and should be added to the three I have just spoken of.

I am accustomed to give two or three grammes of quinine in two or three doses, dissolved by means of a few drops of sulphuric acid, leaving three hours' interval between the doses. Sometimes I give one gramme of the remedy as soon as the patient is in a condition to absorb it, and order repeated a mixture containing two grammes, to be given hourly in tablespoonful doses, so that the mixture shall be exhausted within the space of twelve hours. My aim is to keep the patient's system under the influence of the drug, even after the dynamic action of the first dose has been exhausted. In cases of maximum gravity, where all is anarchy in the animal economy, where we cannot trust much to the activity of the agents of absorption since all the organic functions tend towards annihilation, I use all the ways of administration of remedies, to give by them the salts of quinine. Injections in the rectum, repeated frictions, the endermic method, even the hypodermatic, are made use of by me to saturate the patient with quinine. I resort to the valerianate of quinine alone, only under the two following circumstances: First, when I am convinced that the sulphate is of no avail: Second, when the paroxysm is accompanied by great prostration of strength, by profound adynamia, revealed by the smallness, softness and concentration of the pulse, cooling of the extremities, and weakness of the heart's impulse. Even in this second case I frequently make use of the sulphate of quinine in combination with alcoholic and diffusible general stimulants, either in the same, or distinct prescriptions given alternately at short intervals. This is my procedure when pernicious fever assumes the algid, sudoral, choleraic, syncopal, and ataxo-adynamic forms.

The formulæ to which I give preference in these cases appear in detail in the observations met with in this paper. I differ in opinion from those who believe it preferable, during an algid paroxysm, to first re-establish calorification, excite the circulation, and thus promote reaction, in order afterwards to resort to the salts of quinine. Whoever knows the gravity of algid paroxysms, who has been a close observer of the imminent peril threatening the patient during them, cannot be of this opinion.

There is no doubt that quinine in large doses is a great hyposthenic, a powerful depressant of innervation; no one disputes that among the grave phenomena of cinchonism figure prostration of strength, cooling of the extremities, profuse diaphoresis, slowness and smallness of the pulse and weakness of cardiac contraction, faintness, vertigo, and even syncope; but it must be considered that in the algid, diaphoretic, choleraic, and syncopal forms, their characteristic symptoms are produced by a malarial poisoning; that the salts of quinine neutralize this poison, that they operate in this case as an antidote, and, the cause being removed, its effects should disappear. And, moreover, if the sulphate of quinine inspires suspicion to the timid, they may resort to the valerianate; the excitant properties of valerianic acid on the nervous system correct the depressant action of the quinine which plays the part of base in this saline combination. The sulphate of quinine itself, when combined with opium, ether, canella, valerian, the ammoniacal preparations, musk, and alcoholics, does not produce the hyposthenic effects that customarily follow when given alone and in large doses.

As regards the therapeutic means demanded by the form of the pernicious fever, they vary much, as already stated in the beginning of this section. General blood-letting is rarely indicated; even in the paroxysms of comatose and cerebro-meningeal form, where effusion within the skull is at times very manifest, phlebotomy should be employed with much reserve and caution; the physician should never be unmindful of the tendency of the system, in cases of pernicious fever, to fall into collapse—genuine adynamia. In the older works, especially in those of André, Chomel, Rostan, and Bouillaud, written under

the influence of Broussais' doctrines, we meet with many cases of pernicious fever, then differently defined, in which death occurred a short time after the first or second bleeding. In the highly commendable work of Doctor Dutrouleau, where malarial diseases are well studied, some cases of pernicious fever with very marked cerebral symptoms figure, in which the lancet gave bad results.

Throughout my professional life I have bled barely two patients with pernicious fever, and in both cases very successfully; consequently, I do not absolutely proscribe phlebotomy; there are cases where bleeding is the only means of relieving promptly the congestion of an important viscus, the brain or the lung, which during the paroxysm was the seat of a severe congestion threatening immediate death. If in this supposed case the subject be young, strong, of good constitution, if the pulse be full, hard, and bounding, he will certainly find his salvation in the lancet and in quinine – and without the employment of the former, the latter will avail him nothing; but these conditions are seldom present with us in practice, and therefore general bleeding should be reserved for very special cases. Almost all the physicians of Rio de Janeiro are of this opinion; the Baron de Lauradio, whose long experience and celebrity give him great authority in questions of national practice, declared at a session of the Imperial Academy of Medicine that he was very suspicious of bleeding a patient with pernicious fever, even when evident signs of severe congestion of the brain were manifest; the same opinion was maintained and followed by the Baron de Petropolis in the last ten years of his professorship; Professor Dias da Cruz, who has great scientific attainments and an extensive practice, thinks the same.

Local blood-letting by means of leeches and wet cups is, on the other hand, frequently indicated; it figures in some of the cases published in this paper. In the comatose form, in the cerebro-meningeal, delirious, ardent, pneumonic, hæmoptoic, the physician often needs to prescribe leeches to the verge of the anus, in order to unload the meninges, brain, or lung. When the pernicious paroxysm, whatever be its form, excepting the algid group, is accompanied by great congestion of the liver, leeches to the anus and wet cups to the hypochondrium are of great use. The number of leeches and cups depends upon the patient's conditions of age, temperament, constitution, and robustness, or the strength and fullness of the pulse, date of disease, etc. I have observed some cases of pernicious fever in which the sulphate of quinine, of no avail before blood-letting, was promptly absorbed after the use of a few leeches, and the patient at once sensibly improved.

Purgative medication, represented by emetics and cathartics, in the immense majority of cases of pernicious fever is of recognized benefit. When the bilious element is mingled with the symptoms of the paroxysm, an emetic of ipecac is frequently the indispensable condition of the efficacy of the salts of quinine. At the beginning of an attack, when the febrile reaction is well marked, and the tongue denotes derangement of the *prima viæ*, I am accustomed to add tartar emetic to the ipecac, and this combination has given me good results. The saline cathartics, and in certain cases calomel, in the dose of six decigrammes to one gramme, lend valuable aid at various stages of the disease; calomel, especially, given at the commencement, produces a very prompt salutary effect when there is hyperæmia of the intracranial vessels, as commonly occurs in the comatose, cerebro-meningeal, delirious, and ardent forms. Irritant purgative enemata are very beneficial, chiefly in cases where it is impossible to administer remedies by the mouth, either because there is complete and profound coma (carotic or apoplectic form) or on account of uncontrollable trismus or dysphagia.

Diffusible stimulants and alcoholics, to combat algidity in paroxysms of algid form; cerebral depressants, like belladonna, hyoscyamus, and laurel-water, to lower cerebral excitement in paroxysms of cerebro-meningeal, delirious, and convulsive form; calmatives and antispasmodics—especially opium and its alkaloids, bromide of potassium and chloral,—to correct the nervous symptoms noted in paroxysms of neuralgic, tetanic, epileptic, and asthmatic forms; anti-calorics, such as digitalis, tincture of veratrum, tincture of eucalyptus globulus, tincture of cafer-

ana,* to lower the very high temperature in the paroxysm of ardent form; and many other therapeutic resources indicated by the various shapes which the paroxysms assume, are the auxiliary means employed by the physicians of Rio de Janeiro in the treatment of pernicious fever, and which lend them indisputable service.

From the reading of the cases figuring in this paper, it may be deduced that I almost always use blisters to the lower extremities in cases of pernicious fever. In fact, this practice, which I have followed since I began to practice medicine, has given me such good results that I shall probably not abandon it to the end of my life. In paroxysms where the cerebral centres are compromised, the derivative effect of blisters, besides being beneficial, is felt after they are dressed. I wonder that there are Brazilian physicians, to whose practical and scientific merit all render homage, who dispute the immense advantage of this therapeutic method.

The formulæ I am accustomed to employ in the various instances of pernicious fever, as auxiliary to the quinine treatment, appear in the cases, where many of them are found *in extenso;* therefore I do not repeat them here.

Let me say once again, in finishing this section, owing the question of life and death to the patient, the physician, in presence of a patient attacked by a grave paroxysm, has no time to lose; he should strive solely to correct as speedily as possible the intensity of the symptoms constituting the perniciousness, and prevent the appearance of the following paroxysm, or at least modify its gravity; treatment should be prompt and energetic! On this energy and promptitude essentially depends, I repeat, the salvation of the patient confided to his care.

Rio de Janeiro, Brazil.

THE REMOTE EFFECTS OF GUNSHOT WOUNDS OF THE EXTREMITIES.

BY C. M. WOODWARD, M.D.

Probably no class of injuries have been productive of more widespread and continued suffering during the past three decades than gunshot wounds of the extremities, whether received from arms of large or small calibre. The impact, with resultant *commotion* of nerve structures, is usually so intense, whether the nerves are wounded or not, that paralysis often results. It frequently happens, however, that the nerve structures are wounded, in part or in whole, often torn across, and during the healing process bulbosities are developed which often are the cause of disordered innervation and nutrition; again, cicatricial tissues may form in the track of a missile which may lead to a direct and continuous pressure upon nerve structures; and cicatricial bands and callosities must necessarily sadly interfere with nerve function and nutrition beyond the point of injury or impact, which may lead not only to the production of pain more or less severe and continuous, but also to the development of diseases of a more serious nature, resultant from the disordered nutrition and constant irritation produced either by this or the wound of the nerves, or the presence of a bullet or other missile still remaining in the tissues near the site of a nerve.

Paralysis, and especially paralysis of a reflex character, is perhaps one of the most frequent results of shot wounds of the extremities. There are on record many cases of paralysis resulting from this cause, and there have occurred in the practice of the writer within past years cases of still more serious import, compelling final amputation, even as late as from fifteen to twenty-five years after the receipt of the wound, or even resulting in death itself.

Case 1.—J. D——, wounded at Fredericksburgh, December 13th, 1862. He was marching at double-quick, when a fragment of shell as large as a musket ball struck his right thigh at the juncture of the upper and middle thirds, directly over the femoral artery. The fragment did not enter deeply, merely lodging in the leg, and was removed a day later without injury to the vessel. He fell, half conscious, and, although aware he was wounded, could not fix on the site of the injury until he had examined his leg. He felt instantly a burning pain in both feet, in the front of the right chest, in the right arm, and in the right thigh about the wound. At first he was entirely powerless, but in a short time the power of the left arm returned, leaving

*Caperana or Jacaré-arú (*Tachia Guianensis*), tonic and febrifuge.

him paralyzed as to motion in the right arm and both legs. He lay on the field twenty-four hours, the weather being very cold. Sensation was defective in all the parts paralyzed as to motion. He had no pain in the back, but the burning pains before alluded to continued for a long time. While the wound was healing he had headache and difficult, painful micturition. The wound closed in four weeks, and during this period he regained the power to move the right arm feebly and slowly, though perfectly as to extent; the pain in the side and feet also disappeared. He could not stand, however, or lift his feet or legs from the bed, at the time the wound healed, but there was then no headache or difficulty with the bladder or rectum. January 28th, 1863, he was sent to Washington, where he improved so much as to be able to walk with a cane. However, on being transported to a hospital in a distant city, he suffered relapse, the pains returned, the paralysis increased, and he walked with difficulty on crutches. This patient remained partially paraplegic for a number of years. He had some power to move the thighs when lying down, but could not lift the legs from the bed. Below the knee all motion was lost, except a slight power of flexing the smaller toes in both feet. Pressure upon the cicatrix caused feeble twitching of the anterior muscles of the right thigh; both legs were subject to cramps and twitchings, which increased at night. Both legs became somewhat wasted, and below the knees were relaxed and cold, and the feet were congested. He improved for a time under treatment by strychnine and electricity (Faradization), but finally ceased to improve, and treatment was abandoned. The burning pains in the feet continued to some extent. The tactile sense became feeble in the right leg and arm, but was nowhere entirely lost.

Case 2.—W. A——, private, was wounded July 1st, 1863, at Gettysburg; while kneeling on the left knee, the right knee bent at a right-angle, he was shot in the right thigh in a line with the internal condyle of the femur, ten inches above it and a little anterior to the artery. The ball passed upward, backward, and outward, and emerged two inches below the tuber ischii and one and a quarter inches external to it, just above the nates. Dropping his musket, he fell on his face, weak but not insensible, the right leg violently flexed. For a moment he felt very feeble, but especially so in the right arm, with which he vainly tried to aid himself. After a half-hour the bleeding, which was not excessive, ceased, and he was able to stand on the left leg, but not on the right; and he had scarcely any use of the right arm, which was in no way hurt when he fell. He managed to bind up the wound with a water dressing, and, occasionally renewing it, lay two days on the field. When hit he perceived no pain, but within an honr a burning attacked his instep, and never left it, remaining neither worse nor better. After the wound healed he improved slowly for a time. As he could not walk without aid, a crutch was used. The leg below the knee wasted, the foot was swollen, the toes blue, and there was contraction of the great toe in flexion, although the wound had entirely healed. The tactile sense was absent in the sole of the right foot, feeble in the second toe on its dorsal face, and absent on top of the third toe, but elsewhere complete. Localization extremely confused, so that a touch on the toes was referred to the instep. The pain which he now suffers lies deep in the calf, and extends outside, under and in the peroneal muscles, down the front of the leg, and over the dorsum of the foot; and to the outer side it is intense in the dorsum, and nearly absent in the sole; the pain is of a burning character. Heretofore no treatment seemed to be of avail, although blisters applied over the seat of pain gave the greatest relief, and the use of electricity was apparently of some value.

Case 3.—Michael H——, a private, was wounded in the left thigh, about the junction of the middle with the upper third, on its external aspect, by a Minie-bullet, at the battle of Antietam. He fell flat on his face, but when found on the field had rolled over on his right side. There was never much hæmorrhage. He was taken to hospital and search made for the ball, which was unsuccessful, although no point of exit could be found. The missile had left its track of entrance. In due time the wound healed. In this case, as in the others, there was for a time the same kind of burning pain, which, however, soon subsided; the wounds healed, and the patient apparently recovered and left the hospital. At the close of the war he returned home and was employed as a teamster. At the end of ten years he consulted the writer for a large swelling which, during two years previous, had gradually developed at the knee of the wounded side, at which time it had attained the size of a man's head. The leg was flexed at the knee at an obtuse angle, and locomotion was greatly impeded. On being questioned, the patient stated that he had been wounded in the manner before described, and that the bullet was never found. At the time of this

examination a very small opening existed over the internal condyle of the femur which would admit a Hamilton's bullet-probe. The probe passed readily upwards between the sheaths of the *rectus femoris*, *vastus internus* and *adductor longus* muscles at about the point where they are crossed by the *sartorius*. At this point the probe seemed to meet an obstruction. It was believed that the bullet was lodged at this point. At the request of the writer a day was set for an operation for the removal of the ball, or an exploratory incision to determine more fully if the bullet was yet in the tissues. On again introducing the probe up to the point of obstruction, and an incision being made directly downward at this point, a full-sized Minie-bullet was cut across, and removed from its bed without difficulty. It was found from the marks and furrows upon the missile that it had struck the femur and glanced upward again into the muscles, where it had lodged and had become encased in a provisional callus. As time passed, it had finally, at the point of its sharp edge made by striking the femur, ulcerated through this callus and irritated the soft structures to such a degree that the discharge was produced which sacculated at the knee. After removing the bullet and dressing the wound the collection at the knee was evacuated, and the cavity washed out with a mild antiseptic solution. This case proceeded steadily to complete recovery, and perfect use of the leg resulted. No paralysis occurred in this case: the bullet striking the thigh from its outer aspect did not, apparently, produce sufficient *commotion* in the sciatic or other nerve structures, and the femur was not fractured by the shot.

Case 4.—The following incident occurred to Silas A——, of the 104th New York Volunteers, while engaged in action with his regiment on the second day at the battle of Gettysburg. This regiment was then in line of fire behind a barricade of rails, when one or two regiments of Confederate infantry were seen to emerge from a piece of woods and march across a field directly towards the position occupied by the 104th. The Confederates had tied white handkerchiefs and strips of white cloth to their bayonets and ramrods; and the Volunteers, thinking this demonstration a token of surrender, marched out a short distance from their barricade, with unfixed bayonets, to receive them. When the Confederate line had advanced to within about two hundred yards, they suddenly opened fire on the Union troops. The Volunteers, with the rest of the brigade to which they were attached, retreated to the barricade of rails, leaving their dead and wounded where the first onslaught was made. At this time Silas A—— became separated from his command, from the fact that he did not retreat with his comrades, but remained to have a few parting shots, or "fight it out alone on that line." At this time, having just discharged his piece, his quick eye discovered a Confederate who also was just beginning to load his rifle hurriedly, evidently having selected Silas A—— as his next opponent. There was now a strife between the two men, Confederate and Federal, as to which one should finish loading first. In the hurry and excitement of the moment, Silas A—— dropped his ramrod, recovering which consumed a little time, allowing the Confederate to deliver his fire a second in advance, and, although Silas discharged his piece, he said it was while he was turning a complete somersault. The Confederate bullet took effect. As A—— was standing at the position of *aim*, the ball passed through the left thigh first, making a slight flesh wound, and, striking the right thigh, just missed the femoral vessels and nerves, and passed through, striking the femur slightly, but did not fracture it. He was now "*hors de combat*," was captured by the Confederates and placed in their field hospital, from which he was exchanged four days later. During his four days in hospital not a mouthful of food was given him, and his wounds were not dressed. On coming into the hands of our own surgeons, an amputation of the leg was advised and urged, but he steadfastly objected. He was treated in hospital until his wounds healed, and at the close of the war returned home, and for about fifteen years enjoyed fair health, except that at times he suffered burning pain down the right thigh and anterior portion of the leg. At about this time the great toe began to swell; this swelling would at times recede, and then swell again, until finally it remained permanently swollen and became very painful. This suffering began to be extreme in 1884, twenty-one years after the receipt of the wound. By the summer of 1886 the great toe, which had previously remained swollen, began to turn *blue*, and finally after a few months became truly gangrenous. An amputation of this member was made by a local surgeon, but the stump never perfectly healed. In the course of another year the end of the foot, including all the toes, became gangrenous, and an amputation at the middle of the foot was performed at the University of Michigan by the then professor of surgery. This stump never healed, but re-

mained more or less open, and in it the patient still suffered much pain.

On August 9th, 1888, the writer was consulted as to patient's condition and prospect of receiving any benefit from treatment. The stump was at this time swelling badly and had the appearance of a *scirrhus* or hard cancer. The patient was advised that an

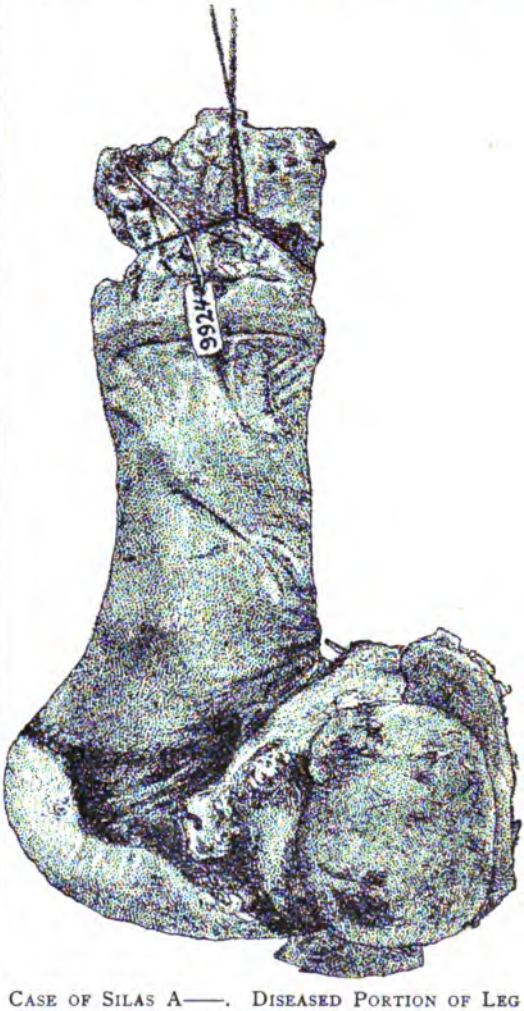
CASE OF SILAS A——. BEFORE AMPUTATION.

amputation made well above the ankle was the only immediate means of relief; that while such relief might not be of a permanent nature, it would at least afford comfort for a time. Acquiescing in this advice the patient was immediately placed on a tonic and alterative course of treatment and hygiene. On the 19th day of September, 1888, the operation was performed by the writer. The stump healed kindly and rapidly and was perfectly

CASE OF SILAS A——. AFTER AMPUTATION.

well in twenty-one days, and the patient able to be about.

In about one month from this time a small swelling appeared in the right groin, which increased in size so rapidly that it soon became as large as a man's head, and was looked upon as probably being a *sarcoma*, and from its rapid growth was thought to be of the "round celled" variety. It maintained its position and great size until the last of November following, when it began to decrease in size. At the same time a tumor of apparently the same character began to develop behind the right ear, which remained a few days, and then disappeared in twenty-four



CASE OF SILAS A——. DISEASED PORTION OF LEG REMOVED.

hours. Immediately symptoms of compression of the brain supervened, and death resulted in a few hours. Thus ended one of the most interesting cases that have occurred in the practice of the writer since the war.*

To report all cases illustrating the remote effects of gunshot wounds of the extremities,

*Through the kindness of the Curator of the Army Medical Museum, it is my pleasure to present for inspection plates of the amputated foot and leg of the patient, showing the condition at the time of the amputation on September 19th, 1888, twenty-five years after the wound in the thigh was received.—AUTHOR.

would make a work too voluminous; these few typical cases, therefore, must suffice.

One is forcibly reminded that in two of these cases several years intervened between the healing of the primary wounds and the appearance of the remote symptoms which led on to a worse condition, and even to death itself.

In some cases of gunshot wounds involving, as they do, the nerves in various ways, paralysis of motion or sensation, or both, may result in some part of the body more or less remote from the seat of the injury, and at a time more or less distant from the date of its occurrence. How can this be explained? Although it has long been known that certain forms of disease are capable of causing paralysis of distant organs, of altering secretions and affecting nutrition, we have had no plausible theory of the causation of these effects by traumatism, unless we recall the fact that the irritation of the vaso-motor nerves is capable of producing contraction of the blood-vessels, and so altering nutrition. It is inferred that when an external nerve is violently or permanently excited by disease or traumatism, it may be able to produce contraction of the capillary vessels of the nerve centres, and thus give rise to paralysis, while it is also possible that the alteration of nutrition which this temporary anæmia causes may result in a continued disturbance of function and nutrition, which, however slight, may bring about the more serious developments mentioned in the case last reported. As the use of the Krug-Jorgensen and other small-bore rifles is still in an experimental period, we cannot know what the remote effects of wounds produced by these guns and the jacketed bullet may be, but it is hoped that while they are sufficient to place the enemy "*hors de combat*" and win the victory, they will not entail the great amount of prolonged suffering that is often produced by the old leaden bullet from guns of larger calibre.

Tecumseh, Mich.

CHOLERA INFANTUM.

BY J. S. ASHBAUGH, M. D.

Cholera infantum occurs most frequently during the first six months of infancy, and is rarely found after the completion of the first dentition. Although dentition cannot be ascribed as a cause, the state of functional and developmental activity of the intestinal follicles at this time certainly acts as a predisposing cause to all forms of intestinal derangement. Heat also plays an important part, most cases occurring when the temperature is highest, and epidemics are generally reported during July and August. In artificially fed infants is found another predisposing cause in improper nutriment, as well as in poor ventilation and filthy surroundings; thus an ordinary case of diarrhœa often becomes suddenly transformed into the graver disease.

This malady moreover is to be distinguished from other forms of infantile diarrhœa by the peculiar character of the stools, which (after the bowel has emptied itself of fæcal matter of very penetrating odor, consisting of undigested food, milk-curd, mucus, etc.) become almost odorless, thin and serous, readily soaking through the clothing and leaving only a greenish stain; these fluid dejections are very irritating, and often induce an erythema about the anus, which should not be overlooked, as a good deal of distress necessarily results. In attending to matters of this kind, we are doing more, perhaps, than we at first realize, for the more comfortable we can make our little patients by attending to details, the greater are their chances for recovery.

The intestinal discharges are also accompanied with persistent vomitings, which soon take on a thin and watery form, mixed with bile and contents of the duodenum. While the skin may seem cooler than usual, the temperature is high, and in the rectum the thermometer frequently registers 102–105°; J. Lewis Smith says there is no disease of infancy in which the temperature of the blood is higher. Naturally there is intense thirst owing to deprivation of the economy of fluids.

The urine is very scanty, and as many cases develop cerebral symptoms, the cause for a proportion of them is, no doubt, to be found in uræmic poisoning, though some attribute to cerebral anæmia, described as spurious hydrocephalus. When this occurs the evacuations become less frequent, or cease altogether, and the temperature may fall below normal. If the case does badly, drowsiness

increases, the fontanelle is depressed, the eyelids remain half closed, and the child bores the occiput into the pillow, gradually sinking into a comatose state; or, as in many fatal cases, convulsions may precede death.

On the other hand, if diarrhœa is not arrested, exhaustion soon results. The face becomes old-looking, the eyes sunken and surrounded by dark rings, the skin clammy and cyanosed.

In favorable cases, the first improvement is heralded by cessation of vomiting, and ability to retain food; the evacuations become less frequent, and temperature gradually falls to normal. Convalescence may be prolonged by a recurrence of the symptoms.

In beginning treatment, the room should first be made as cool as possible, and provision made for the admission of plenty of fresh air; or, if convenient, the child may be taken outside during the day. Cleanliness must be enforced, particularly in regard to the nursing-bottle and clothing. In hand-fed children, a wet nurse is recommended, but this, as a rule, cannot be carried out, and cows' milk duly diluted is perhaps the best substitute; to prevent the curdling of the diet in the stomach, barley-water may advantageously be added,—this latter is readily made by boiling in a quart of water a cupful of unhusked barley for four hours, then straining and allowing to cool; thereby is formed a jelly which may be dissolved by heating in water. Lime-water added to the milk will tend to correct acid fermentation. In cases which have developed suddenly, it may be advisable to give no nourishment for several hours. In any event food should be given not oftener than every three hours, and then only in small quantities. The mistake of over-feeding is often made.

Of medicines we have many recommended —abundant evidence there is no specific. By the mouth I usually prescribe small doses of calomel (one-twentieth grain) with bicarbonate of soda and sugar of milk, every hour. The deodorized tincture of opium, in one-half to one-drop doses, often acts well in controlling the bowels, and is, I think, the best preparation of opium. Arsenite of copper in minute doses, in solution, every fifteen minutes, has been recommended very highly, but I have not used it in cholera infantum. By the rectum, five drops of laudanum in half an ounce of starch will sometimes check the diarrhœa. Carbolic acid, one-quarter to one-half-drop doses, combined with large doses of bismuth every three or four hours, is often useful in checking the vomiting. Mild counter-irritation over the stomach and abdomen, by means of camphorated oil, or flannel wrung out of mustard-water, is used by some.

Stimulants are required in most instances, and should be employed before the case has gone too far, and not as a *dernier ressort*—whiskey, in thirty-drop doses, repeated frequently, and given in barley-water, is best, champagne being too expensive and giving no better results. Lavage has been used extensively in the New York Asylum for Infants—fifteen hundred cases in two years—with no evil results, but would be more difficult to perform in private practice.

For reducing the temperature, which is a dangerous symptom, I have used cold sponging, not as yet having had courage to try the bath.

Windsor, Ontario.

CONSUMPTION BY HEREDITY.*

BY ED. E. DORR, M.D.

Regarding consumption, I have no new ideas, nor have I discovered any new features as to diagnosis and treatment; nevertheless it is a topic in which I am deeply interested, as it brings to memory one of the saddest events in my life, with all the possibilities of a repetition in the future.

I have taken pains to determine the opinion of authorities on this subject; I have called into use the experiences of friends in the profession; I have been influenced by my own experiences, small though they be as compared with that of many others. I have attended a child under one year of age suffering with miliary tuberculosis where not one single instance of hereditary predisposition could be discovered among either parents, grand-parents, uncles or aunts; I have attended patients of the age of sixteen or seventeen whose brothers and sisters had

*Read before the Des Moines Valley Medical Society.

died of this dread disease and whose parents were living and healthy. Again, I have attended women, fifty years or more of age, who have developed pulmonary phthisis or tuberculous glands, and who have borne children, still robust, rugged, and healthy. Such a case came under my observation less than a year ago, when I removed the cervical glands from the neck, and all I could reach below the clavicle, yet they recurred at the angle of the jaw and posterior to the ear; and these I also removed only to find all were tuberculous. Though her father had died of consumption, her son, who was present at both operations, was finely developed, almost an athlete, and perfectly healthy.

Of some twenty cases coming under my observation at the Des Moines hospital in the last two years, I remember but two who ever gave a history of consumption in the family among parents; the father of one girl died of consumption when she was four or five years old, and she died of miliary tuberculosis after an illness of about five weeks, at the age of sixteen, after contracting a severe cold.

There is another class of cases with which we are all familiar: The father or mother dies of consumption, brothers and sisters follow each other at regular intervals, all victims of the same dread disease; some reach the age of twenty or twenty-one, few dying under the age of fourteen or fifteen.

If the theory of heredity is accepted, the results of infection by tubercle bacilli must be expected to soon appear, since we know by experience the wonderful growth of these germs and the consequent destruction to tissue and life during their development. What plausible theory can be advanced for a dormant condition of these germs; and can they become encapsuled like trichinæ and remain indefinitely, to be set at liberty when their host becomes the victim of some severe cold?

It hardly seems possible that these germs, small though they be, can become the guests of a spermatozoön and thus be transmitted to offspring to develop tuberculosis fourteen, twenty, or even fifty years later; yet this is *heredity!* The question arises as to whether a man can withstand the ravages of tuberculosis until the testes shall harbor the germ of the disease and yet be able to furnish healthy spermatozoa? Is not the presence of tubercle bacilli itself sufficient to destroy the activity of the spermatozoön? And in women where the consumptive process has extended so far that the ova are infected, will not the system be so reduced that the menses will cease, being needed in the general circulation, and thus prevent conception? It has been my observation that the menses cease early in such cases.

An inherited disease is recognized as one in which the blood of the progenitor becomes impregnated, infiltrated, or infected with the germ, or whatever it is, of infection, and is thus conveyed by the spermatozoön to the ovum. Syphilis is such a disease, though the active principle thereof is not known; but we do recognize its fondness for mercury.

Rheumatism and gout, scrofula and insanity, are also accredited with being hereditary diseases, but this is untrue, since they are the results of inherited *tendency* merely; and I am confident tuberculosis is entitled to classification in the same category. Does the tubercle bacillus occur in the blood of the tubercular patient and does it again appear in the offspring? If it does occur in the blood, as believed by some, there is no reason to doubt that it will again appear in the child; and if so, pray how long before it ought to develop in the latter? If it can be transmitted in spermatozoön or ovum, then it ought sometimes to make its appearance as syphilis often does—*in utero;* yet I do not remember even *hearing* of such a case. Surely the tubercle bacillus has all the environment for its development — uniform heat, moisture and nourishment.

I have now under observation a man on whom I operated eighteen months ago for tubercular abscess, and who had been under treatment for pulmonary phthisis for some time before; since then he has had numerous suppurating glands and abscesses opened; and three months ago I amputated his right index finger for this trouble, finding it necessary to remove the metacarpal bone, as it was entirely infiltrated. This man is the father of a child born about a month after the last operation—I have every reason to believe the child to be his—and yet the infant bears no marks, signs, or symptoms

whatever of tubercular trouble; such a robust child would be the pride of any parent. Now here is a child whose conception occurred six or eight months after the demonstration of the disease in the father! Why are there no signs of the disease?

Vogel declares: "There is no disease that is so positively inheritable as tuberculosis." Osler, an equal if not better authority, says: "In extremely rare instances the disease is congenital," and farther expresses his doubt, accepting, however, the theory of hereditary tendency. Strumpell, one of the greatest authorities of modern times, adds: "Tuberculosis in itself is not inherited, but only the predisposition to tubercular disease;" and he has had a field almost unequaled in which to observe this disease, viz., in the polyclinic at the University of Leipsic. Here are three noted authorities differing from each other in a very marked degree.

The hereditary tendency to gout, rheumatism, insanity, and other diseases, we all accept. The hereditary weakness of brain force we call inherited insanity, and it is invariably classed as an inherited disease; but who will accept the theory that the insanity of the father is inherent in the son? And yet who will doubt the inherited *tendency* to insanity in the son of an insane father? Just in such proportion as insanity is inherited will I accept the theory of inherited tuberculosis.

Tuberculosis is a germ disease. Syphilis, so far as known, is not; neither is scrofula or rheumatism. In tuberculosis we have a germ that multiplies, that colonizes, that must have a certain temperature for its development; it exists without as well as within the body, and yet must be transmitted through the spermatozoön or ovum to an offspring! Such a process seems to be impossible; I would as soon suspect the heredity of typhoid fever or gonorrhœa as the heredity of tuberculosis.

That weak lungs may be expected in children whose parents have deficient lung power is natural; we expect a weak-minded child from parents with less than ordinary intelligence; in fact, we expect almost any condition in the child that we have in the parents. That these parents with tuberculosis have placed upon their offspring a tendency to weakness of some particular part is true, but to engender in their child this weakness, added to the germs of tuberculosis, is apparently impossible.

We know that the germs of tuberculosis exist nearly everywhere; no country is exempt from their ravages; they lurk in every corner, in the ball-room, the theatre, the auction store, and the private house; they are carried in the air, in books, in clothing, in a hundred different ways, awaiting only the medium in which to set up their domain and establish colonies of life-destroyers. This we know, since experience has taught us. Scientific men have devoted their lives to trapping the bacilli and studying their habits and results accruing thereto; yet I cannot believe these germs can fasten themselves upon a microscopic spermatozoön and thereby become the progenitors of a disease that will destroy, after fifty or sixty years of quietude, all the time existing in surroundings which prompt and aid their growth.

Des Moines, Iowa.

FLOATING KIDNEY.*

BY W. A. CAMPBELL, M.D.

Unlike the other abdominal viscera, the kidneys have no ligaments by which to receive support. Normally they weigh from four to six ounces and are imbedded in a cushion of fat posterior to the peritoneum, which latter covers their anterior surface to a variable extent. Their only support is the tunica adiposa posteriorly, the peritoneum anteriorly, and the blood-vessels entering the hilum of the kidney and the supra-renal capsule internally. From their size and the scant means of support, is it to be wondered that they are not misplaced oftener than they are? The extent of misplacement varies from a slight displacement downward to that in which the organ may be found in the distant parts of the abdomen. To the former has been given the name of "movable kidney," to the latter "floating kidney" (Edebohls).

A "movable kidney," then, is one whose displacement is confined to the capsule of the kidney and is necessarily limited in its movements. A "floating kidney" is one supplied

*Read before the Colorado State Medical Society, June, 1894.

by a meso-nephron, and its movements are only limited by the length of this meso-nephron, which is formed by a folding in of the peritoneum and the blood-vessels, ureter, nerves, lymphatics and cellular tissue. It is to the second classification that I desire to call attention briefly.

One or both kidneys may be displaced in the same individual. The latter is of rather rare occurrence, and the history of such a case prompted me to prepare this paper.

The left kidney is usually the larger (Gray, M'Lellan) of the two. The right kidney is the most frequently displaced. This is accounted for by the pressure of the liver, which may be very variable under different pathological conditions.

The ætiology of the floating kidney is not always easy to get at. External violence has been known to tear the organ from its moorings and cause it to become a floater within the confines of the abdominal parietes. Violent muscular efforts and the act of vomiting have also been accredited with causing displacement. The wasting diseases which cause an absorption of fat in the tunica adiposa, take away from the kidney its chief support, and hence cause it to be a wanderer. The bearing of children and the lax belly that follows, conduce to its production by taking away the support of the abdominal walls, hence that of the abdominal viscera. Edebohls speaks of the inter-dependence between movable kidney and the disease of female sexual organs:* Out of 500 women examined he found ninety movable, two floating, and four cases where both kidneys were movable.

I will now give the history of a case and then speak of the diagnosis, symptoms and treatment:

Mrs. B——, aged 38 years, American, married seventeen years ago, re-married three years later. Has one child eleven years old, but was never pregnant but the once; has had poor health since the birth of child, and been under medical treatment much of the time. First noticed the presence of tumors soon after confinement, which gradually gravitated lower in abdomen. Examined at different times by two physicians, who diagnosed "aortic aneurysm." On first examination by me on August 4th, 1893, I diagnosed "floating kidney." The rarity of seeing double floating kidneys, and the difference of opinion from that of previous physicians, prompted me to ask the late Doctor J. M. Keating to see her, when he confirmed my diagnosis and stated it was the first case he ever saw with double floating kidney.

The left kidney was lower than the right, and lay midway between the median line and the anterior superior spine of the ilium; the patient being thin in flesh the outline of the organ was readily made out, and it was easily restored to normal position with patient on the back. The right was as readily made out, on a level with the umbilicus, and returned to position as readily as the left. They both appeared to be immediately beneath the abdominal walls. When the patient was turned on the side, the kidney of the opposite side rotated on its hilum toward the median line.

The uterus was subinvoluted, with an endometritis and erosion of the cervix. She had been treated by a former physician for repeated attacks of "gastric fever."

The subjective symptoms were: Constant dragging pain in back and abdomen, headache, general feeling of depression; very nervous and almost despondent at times; inability to perform household duties to any extent. The dorsal decubitus was the only position in which she could get any sleep. Urine normal in amount and elements. A short time ago Doctor S. E. Solly examined her with me and confirmed the previous diagnosis. The kidneys have made no change in the past ten months.

Advised an abdominal support, but this was later discarded and no treatment instituted.

It is quite important that one be correct in the diagnosis of a floating kidney. Sex, age, and occupation should be taken into consideration. It is true that both sexes, all ages, and the various occupations may be represented, yet the great majority will be found in women who have lax abdominal walls and a scarcity of fat, and their ages will range from twenty-five to forty-five years; they are women who have borne children, had the cares of a home, and done much hard work. If it occur in the higher walks of life it is generally due to acts of violence in the delicate.

Floating kidney on the right may be mistaken for the right lobe of liver, distended gall-bladder, or cancer of pylorus; on the left, for the spleen or for an aortic aneurysm;

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or a floating kidney on either side may be mistaken for an omental or ovarian tumor. The diagnosis will at first have to be made by exclusion, and then confirmed by facts obtained by physical exploration. Suffice it to say that when abdominal walls are found relaxed, and tumors found that can be readily discerned and grasped between the hand so that their contour conforms to that of the kidney, when they roll to the median line if the patient is put upon the side and readily return to their proper site when pressed in that direction, there is no difficulty in making out a diagnosis.—Doctor Franks* considers the last named symptom as pathognomonic; and Doctor Reed† speaks of the importance of correct diagnosis as follows:

The experience of the writer has led him to believe that the existence of a floating kidney is more likely to be misunderstood and mistaken for something else than any other disease of the abdominal cavity.

I have seen floating kidney treated for "lumbago," also for so-called "sciatic rheumatism." In another case I saw an able practitioner tap it for "ascites;" and still another case where it was mistaken for an enlarged ovary.

On the other hand, I have seen an enlarged and pendent "gall-bladder" filled with gall-stones, mistaken for a movable kidney, and the mistake was not discovered until revealed by an operation. With these few examples under observation and occurring in the experience of able practitioners, it is quite evident that the diagnosis of a floating kidney is not always an easy task. In fact, it has been my experience that the early diagnosis of a floating kidney is seldom made, unless the patient is so fortunate as to fall into the hands of an experienced diagnostician in this class of infirmities.

When the kidney is fixed in its abnormal position by inflammatory adhesions, it is often impossible to arrive at a correct diagnosis except by exploratory incision. Again, unless there be a diseased condition independent of the misplacement, the examination of the urine will be a negative one. Should the meso-nephron become twisted and the ureter closed, hydro-nephrosis will supervene, and the circulation in the kidney will become embarrassed and lead to degenerative changes.

The most common symptoms are those due to irritation of the nervous system. The kidneys are supplied by the renal plexus of nerves, which is formed by filaments from the solar plexus and lesser splanchnic nerves; from the renal plexus some filaments pass to the spermatic plexus and the ureter (Gray). Being so abundantly supplied with nerves direct from the solar plexus, the centre of the sympathetic nervous system for the abdominal cavity, it is readily seen why traction upon these nerves produces many disturbances of the abdominal viscera.

The most annoying symptom is the psychical disturbance due to the presence of a tumor in the abdomen. When a correct diagnosis is made and the patient assured that as long as the kidney is healthy its displacement will not seriously affect health, and that there is a surgical operation for her relief when she sees fit to submit to it, she will be much better satisfied.

There is little to be done by the general practitioner for the relief of these cases. He can recommend the wearing of an abdominal support and in this way limit the movements of the kidney in a degree; and he can prescribe for the patient in a general way and perhaps succeed in building up the jaded life; but after all, to the surgeon belongs the radical cure.

Colorado Springs, Col.

American Medical Journal, vol. cv, p. 702.

†*Journal of the American Medical Association*, May 12th, 1894.

INTERNAL USE OF ANTISEPTICS.

Recently, in *Vratch*, Doctor Triwousse took a strong stand against internal antiseptic treatment, which he asserts is "not only useless, but positively injurious under certain circumstances, especially in cholera." He further calls attention to the fact that certain microbes, especially those accredited to cholera and typhoid fever, when taken into the human economy largely lose their virulence, and are able to reacquire the same only by passing through water, air, soil, etc.; and that at the time when we observe these diseases the microbes and other toxines are no longer dangerous.

This is good practical common sense.

Correspondence.

A SOLILOQUY.

Editor MEDICAL AGE:

As Doctor Blank opened his journal the other day and glanced at the table of contents, he gave a sigh when he saw, as usual, the customary heading, "Proceedings of Societies;" then gave vent to the thought, as he had many times before: "Do other medical men find this as much of a bore as I do?"

A society report to be of any value should be full and complete, but instead we usually obtain from such the information that Doctor A does not agree with Doctor C, and that in fact *his* experience has always been just the other way, while Doctor X has had quite another experience, one indeed that is radically different from those of the other two—and so on to the end of the dreary chapter, this week's journal being but a repetition of that of last, and the latter in turn of the one of the week before; and if the physician is unlucky enough to take two or three journals, he finds the same rubbish rehashed over and over with little or no variation.

Is it wonderful that occasionally the patience of the medical man gives out, and that he queries: To what purpose is all this waste? Does anyone gain anything of value from a summary of what our beloved brother thinks, when it is quite impossible to know the grounds of his opinion?

It may be of some importance to Doctor Blank to inform the profession throughout the length and breadth of the country as to his precise opinion of appendicitis or of lap—I beg pardon—cœliotomy, but really *is it* of much importance, especially as we are permitted but the merest summary of what that opinion is?

A medical society may have value to those who are able to join in or listen to its debates, or to one who has a paper to prepare for presentation to its members; it has also a very great value to the younger men in a variety of ways; it has a social, friendly, and we may hope a humanizing, influence on its members. It has always seemed to me that one of the besetting sins of our profession, from its very nature, is egoism; and if so, the friction of a discussion and the measurement of one medical man by the standard of others will perhaps yield him a sense of proportion which he is unable to secure in the privacy of his own practice. The successful man, whether lawyer, minister or doctor, is prone, from the very nature of mankind, to over-estimate himself and his own particular merits; hence it is very good discipline if in some way he is obliged to measure himself with his fellows; but it certainly is not essential that the entire profession should be called upon to see him measured.

Perhaps I have grumbled enough, and as grumblers are very apt to be unjust—and I dare say if I was in the place of some editors I would be quite willing to fill up my pages with material, even if not always of the best—I will beat an abrupt retreat.

Most sincerely yours,

RUS MEDICUS.

Bristol, Conn., 1894.

WATER AS AN ANTIPYRETIC.

Editor MEDICAL AGE:

Doctor Haynes, commenting upon the use of the coal-tar derivatives as antipyretics, says he cannot understand how a physician is able to know the progress which his patient is making when the "sign board"—fever—is absent or veiled by their usage.

Now I would like to say that I think the Doctor has sounded the keynote of the whole matter. As he says, fever is the "sign board," and we all recognize it as such; but not only do these antipyretics destroy its value, but they so modify the other conditions—circulation, nutrition, and nervous manifestations—that we have practically nothing to guide us. We have an entirely *artificial condition* throughout, if I may be allowed the term. Of course this is true, in a measure, of all manner of treatment; but if we, as the Doctor suggests, rely to a greater extent on the more simple method of cold baths for the reduction of elevated temperature, we produce far less disturbance, while we accomplish our object much more perfectly.

Since I recognized the truth of this, long ago, my practice has been to use less and less of these drugs and to assign to simple water a wider sphere of usefulness, and I may say that I am satisfied that the change has been productive of no harm.

The longer my experience, the more fully am I convinced that the simpler the methods of treatment of disease the better the results. In typhoid fever there is no better *régime* than cold baths combined with simple supporting measures; patients recover more quickly, certainly, and *completely*, and *with less danger of relapse*, under this treatment than under any other that can be adopted.

It is my opinion that, as we discard our

prejudices, and overcome those of our patients, regarding the liberal use of cold water —and hot too, for that matter, though the prejudice here is not so great—we will make use of it in many diseases and abnormal conditions where now it is customary to resort to means more elaborate and *not* more effective.

GEORGE H. GOODYEAR.

Milbank, South Dakota,
August 13th, 1894.

ANENT THE MEDICAL COLLEGES.

Doctor Jerome Cochran, of Montgomery, Alabama, declares that "we have more medical colleges than we need," and also "more doctors than we need."

Again, that "full-fledged professors grow up in a night, like Jonah's gourd; diplomas in high-sounding Latin and on excellent sheepskin are ordered by the thousand, and the only thing left to do is to get students."

He further adds that the cause of antagonism between medical colleges and the medical profession is due to the fact that the great majority of the former have been built by private enterprise, and are "managed for the private emolument, in money and reputation, of the men who built them."

Finally, he most pungently remarks:

The most interesting chapters in the history of the American medical profession are those that describe the emancipation of the profession from the tyranny of the medical colleges—a struggle that has been going on for the last fifty years, and which is not yet completely won.

IS IT A NEW PARASITE?

Doctor Ward, of the University of Nebraska, claims to have discovered the existence of the fluke, *Distoma Ringeri*, in his native State. Hitherto the creature has been supposed to exist only in the far Orient, where it infests the lung, giving rise to periodical hæmoptysis, and chronic cough with rusty mucoid expectoration.

We may be permitted to doubt the validity of this discovery, especially since with equal certainty, not long since, was announced the impossible discovery of *Bilharzia hæmatobia* in an individual who had never been outside the limits of the States of Indiana and Illinois.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., SEPT. 10, 1894.

Editorial.

"BELLY-RIPPING."

The *St. Louis Clinique* admits: "There can be no question that many bellies have been opened practically for experimental purposes;" that there is a tendency on the part of individuals to boast the number of their operations "without a death," thereby implying the safety of the laparotomy operation. Yet this journal apparently upholds the "exploratory incision," which is no less pernicious, for it says: "If a mistake in diagnosis were found out . . . the healthy organs would be replaced and no mutilation practiced."

Now it is the very "exploratory cœliotomy" that is most pernicious, in that it tempts every back-woods and cross-roads doctor to become a "belly-ripper." It is no less dangerous because "exploratory" —a term that in practice is too often contradictory. Atop of this it is well to note that in France, Belgium, and Holland, cœliotomies, so common a few years since, are almost unheard-of to-day, and that the same classes of cases that formerly were held to imperatively demand opening the abdomen, are showing equally as good a per cent. of recoveries without resort to the knife. "Belly-ripping" is a fad that has already redounded to the disgrace of America because of the pernicious extremes to which it is daily carried. If as much attention was paid to legitimate therapeutics as is now demanded for study of microbes and so-called *technique*—the latter a much abused word adopted from the French, and used most glibly by those least familiar with their own native tongue—the advance in medicine would be much more rapid and a hundred times more beneficial.

All of medicine is not comprised in use of knife—any butcher can master it,—or a hunt

after unknown and uncertain germs. Patients have a right to demand the best interests and abilities of the profession be exerted in their behalf, and that they be not made subjects for callow experimentation.

A COMMON SOURCE OF ERROR IN TESTING URINE FOR SUGAR.

In *The Lancet* (London) Sir George Johnson explains a mistake often made when employing the copper test for sugar, the gist of which is substantially as follows:

Normal urine contains two substances resembling glucose in their power to reduce copper oxide, viz.: uric acid and kreatinin. Doctor Pavy's theory that three-fourths of the reducing power of normal urine upon copper solution is due "to the small amount of sugar naturally present" is incorrect.

By mixing mercuric chloride with urine the uric acid is separated, and, further, the kreatinin is obtained as a definite chemical compound. These latter having been thus removed, and the excess of mercury gotten rid of by ammonia and subsequent filtration, it will be found the filtrate is without reducing power upon copper solution or upon picric acid.—That the separation of kreatinin by mercuric chloride does not remove any glucose is evidenced by the fact that when a known quantity of the latter is added to normal urine it is found undiminished after the removal of kreatinin. Thus the kreatinin of normal urine is sufficient to account for the total reduction of picric acid when this agent is employed as a test, and likewise for three-fourths of the reduction of cupric oxide, the remaining fourth being due to uric acid. Additional evidence of the absence of sugar in normal urine is afforded by the fact that the very sensitive phenyl-hydrazin test gives no indications.

In using the picric-acid test for glucose with knowledge (which every practitioner *should* possess) of the reducing action of kreatinin, it is scarcely possible to fall into the error of supposing that sugar exists in urine that is quite free therefrom. When to a drachm of normal urine (in a test tube half an inch in diameter) are added an equal volume of a saturated solution of picric acid and half a drachm of liquor potassæ, the mixture immediately becomes red owing to the partial reduction of picric acid by kreatinin,—kreatinin differs from glucose in the fact that in the presence of potash it exerts a reducing action on picric acid at the ordinary temperature of air. When kept at the boiling-point for a minute the color is deepened, and in normal urine may be such as to indicate what (if glucose is the reducing agent) would equal from 0.6 to 1.2 grains per fluidounce, as shown by the picro-saccharometer. It has repeatedly been proved that a solution of glucose in the proportion of two grains to the fluidounce of water, when tested as already described, gives so dark a color that no red light is visible through the middle of the column of liquid. If, therefore, in a sample of urine thus tested, a bright red color permeates the full diameter of the test tube when held up to the light, the reduction is due to kreatinin alone, and not to glucose. If, however, the color is so dark as to indicate an amount of reduction equivalent to two or more grains of glucose, this is more than the largest proportion of kreatinin ever found hitherto in any specimen of urine, and the presence of sugar is indicated. The amount of sugar can be determined after separating the kreatinin by the mercuric-chloride process described.

HYPODERMATIC CATHARSIS.

The discovery of an agent capable of acting readily and speedily as a cathartic when applied sub-dermically, has long been deemed a therapeutic desideratum; consequently, from time to time, different drugs, because of their real or supposed purgative virtues, have been recommended for such use. Recently medical journals on this side of the Altantic, with more or less unanimity — governed doubtless by their advertising patronage—have given space to statements that the desired effect could be produced by means of sulphate of magnesium.

The editor of this journal, having had some experience in the way of experimentation with different substances, including colocynthidin, citrullin, etc., naturally gave these statements little credit; but their continued reiteration led to a new series of experiments.

A number of tablets of both sulphate of magnesium and sulphite of soda were prepared, embodying the utmost quantity available for hypodermatic use. These were employed by the writer in some thirty instances, and a quantity distributed among a half-dozen other physicians, who used them in from fifteen to fifty cases each. In no instance was any cathartic effect observed, except now and again when a patient was informed of a probable purgative action—here the results were only such as would accrue to "suggestion." In one instance the physician experimented upon himself, making use of two tablets of magnesium sulphate of one and one-half grains each, injecting into the upper and external aspect of the thigh at 8 P.M.; at 10 P.M. he retired to stool, but felt no assistance had been given to defæcation—was rather constipated than otherwise. Being very easily influenced by laxatives, and the hour of defæcation being that of daily habit, he is quite positive that no better test could have been given of the utter inefficiency of the drug. The writer also failed to observe any benefit when employed upon himself or others, in each instance the element of "suggestion" being carefully guarded against. Further, the evidence *per se* is conclusive that neither magnesium sulphate or soda sulphite can be employed hypodermatically as a purgative, even were one sure of a cathartic effect, since the dose available for the sub-cellular method is entirely too small, and the method itself, so far as purgative drugs are concerned, too unsatisfactory for adoption; moreover, it has been repeatedly and conclusively shown that catharsis cannot be induced by the introduction beneath the skin of purgative elements.

FOREIGN BODIES IN NOSE AND EAR.

Doctor W. R. Fowler, in the *American Medical Journal*, recently advocated the crochet-needle for removal of foreign bodies from the nose. Only a short time previously we observed a recommendation, from some other physician, of the ubiquitous hair-pin—which with ladies is "indispensable from bangs to boots"—for like purpose, and also for relieving the external auditory meatus under similar conditions of accident.

When will practitioners learn that the use of uncertain, abnormal, and dangerous—not to say severe—methods, is always highly reprehensible, especially when there are others available much more precise and simple? We will venture the assertion that hundreds of cases of injury to ear and nose have had their origin in the pernicious use of surgical or pseudo-surgical practices by the laity and by medical men devoid of that chief therapeutic attribute, common sense.

As in the instance reported by Doctor Fowler, the foreign object, swollen by absorption of moisture, often proves difficult of seizure by forceps. In such case it must be manifest that repeated attempts at direct removal can result only in pushing the object farther back into the cavity until it meets some resistance whereby it can be impacted. The danger to the ear is incalculable; in the nostril the body may be lodged among the turbinated bones or pushed into the throat.

Whether in nose or ear, foreign bodies, in the majority of instances, may be readily removed by the use of a hard rubber ear-syringe, of the capacity of one or two ounces: In the ear by directing a current of warm water to one side of the canal, whereby the current passes the object, fills the space behind, and forces it outward: In the nose the same method may be readily applied by forcing the current of fluid through the opposite nostril, the head being slightly inclined downward—the theory being precisely the same as is taken advantage of in the treatment of catarrh by Thudicum's douche.

SOME NEW DRUG NAMES.

The following appear in a single issue of *The Lancet* (London):

Nepenthe; Malakine; Virol; Pepsalia; Pumiline; Antinervine; Cerebrine; Papaine; Anestile; Opiatine; Lintus tussi; Kreochyle; Vapocresoline; Liquor chiralt; Cocoatina; Izal; Bynol.

It would seem as if nostrum-makers are courting a retreat in Bedlam in their powerful efforts to create new titles—titles which, in the majority of instances, are fully as senseless as they appear to the uninitiated.

EDITORIAL NOTES.

Ophthalmic Novelties.—

Parke, Davis & Company have gotten up two novelties: First, a Medicine-dropper and Bottle, graduated: Second, a pocket Ophthalmic Case containing a dropper of the most approved form, and bottles of tablets as follows — Atropine, 1 grain; Boric acid, 5 grains; Cocaine hydrochlorate, 1⅛ grains; Copper sulphate, 1 grain; Physostigmine salicylate, ⅛ grain; Sodium borate, 5 grains; Tannic acid, 5 grains; and, Zinc sulphate, 1 grain. These will be found equally valuable and convenient for the general practitioner or the specialist.

Cream-of-Tartar Trees.—

The *Registered Pharmacist* is responsible for the statement that the baobab tree of Senegal, *Adansonia digitata*, contains nearly two per cent. of free tartaric acid and nearly twelve per cent. of bitartrate of potassium. The acid is contained in the farinaceous pulp surrounding the seed, and has long been highly esteemed by natives and foreigners, who mix with water in order to make a refreshing beverage.

The *Adansonia Gregorii*, or gouty-stem tree, of Northern Australia, also yields cream of tartar.

The Healthiest City in the World.—

According to the *Glasgow Evening News* it appears that late statistics give to Berlin the honor of being the healthiest city in the world—the death-rate is only 16.3 per 1,000. The unhealthiest city is Alexandria in Egypt, which, despite its unvarying fine weather, three hundred fountains, and soft sea-breezes, has a death-rate of no less than 52.9 per 1,000. Immense London occupies a favorable position with a rate of 20.3; but Stockholm and Christiania are better off with rates of 16.9 and 19 respectively.

The Rome Congress and the Gala Performance.—

"In the evening there was a gala representation at the Costanzi Theatre. The Italians have a novel conception of gala performances. They are a source of profit; this was paid for by the members of Congress. The prices of admission were doubled, and trebled, in honor of the guests. Even the daily journals were unable to conceal their amazement, and asked who it was that profited by this arrangement. What does M. Baccelli think of it?"—*Concours Medical.*

Normandy Cattle.—

Our friend Doctor Liautard, editor of *The American Veterinary Review*, recommends the introduction of Normandy cattle ("Contentine" the breed is called in Europe) to take the place of the Jerseys which are so popular. He says that in addition to the fact the breed is the finest milking race in the world, it is free from pleuro-pneumonia and tuberculosis.

Tuberculosis in Domestic Animals.—

Recently investigations as to the prevalence of tuberculosis among small domestic animals were made at the Berlin Veterinary School. It appears that cats suffer from the malady to the extent of five per cent.; dogs only four per cent.; parrots twenty-five per cent.—doubtless due to imperfect acclimation,—hence are somewhat dangerous pets.

A Novel Clinical Record.—

It is said there is a tombstone in a burying-ground in London, upon one side of which is borne the usual inscriptions as to name, age, etc., while the reverse reads as follows:

> In 67 months she was tap'd 66 times
> Had taken away 240 gallons of water
> Without ever repining at her case
> Or ever fearing the operation.

Practical Advice.—

"A young medical man who runs off into a specialty, honestly believing that a human organ can be studied and treated separately like the wheel of a watch, has not intellect enough to be a physician, and ought to have been discouraged from entering the ranks."—JACOBI.

Postal Transmission of Smallpox.—

Doctor Karkeek, health officer of Torquay, England, records in his report for last year the occurrence of two cases of smallpox in which the infection was conveyed by correspondence from a nurse in a smallpox hospital.

Items and News.

Vagaries of Modern Pharmacy and Chemico-Therapeutics.—

The reason of the present situation — or imbroglio—is obvious. By the side of the chemist stands the busy practitioner or the over-wrought professor. Both are oppressed by the sense of insufficiency of their art. Neither has the time to observe, reason and conclude. It is the professor who publishes with railroad haste his observations and impressions, for he is ever haunted by fear lest another should precede him in the new discovery. He it is who makes others follow, sheep-like, in the wake. He constitutes himself a bustling impressario, always on the lookout for a new sensation, agitating himself and the public; and, finding that he has before him a fickle, unquiet, impatient audience, he hastens to deal with new subjects, if not every day, at least every week. During the year 1893, sixty-eight new chemical products were recommended to me, this figure not being inclusive of entirely new drugs or their active principles. In each case we are told that the new product is of the very first importance, of exceptional therapeutic value, and *perfectly harmless*. But the wise man will not allow himself to be taken in; he will be guided by the therapeutic teaching such as that of the immortal Baglivi, the author of the pregnant phrase, "*Arts tota in observatione*," or by the dictum of my honored friend, Professor Semmola, delivered with all his *mæstria Italiani* from his chair in the University of Naples, a university which has lately set a glorious example to Europe, that a drug that is efficacious *cannot be harmless*.

Nearly all new remedies have their period of success, be it but an hour, and this is due to "suggestions" either by medical men or patients: But, with few exceptions, these panaceas are doomed to be laid aside as forgotten and antique curiosities. — Professor Stokvis, before the International Medical Congress.

The Fashion of Disease.—

You would hardly think it, but disease has fashions, and fashions change like the styles of ladies' bonnets. Now microbes are in the ascendant, and laparotomy is the fashionable surgery. Now the electric cautery is the remedy for nose and throat, and the upper end is burned out. Thirty years ago gynæcology was the fashion, and every woman was turned up to the wind, and the lower end burned out with escharotics.

An old saw says, "It is better to be in Hades than out of the fashion," and yet I imagine it is better to pursue the even tenor of our way, study disease as we find it, and especially study the remedies that relieve. People are impressed by the average doctor that the new things are the good things; new twaddle great wisdom; and that the modern doctor knows more than he of a quarter of a century ago. I say "people are impressed," but I should have said there is a strong effort made to impress them that this is the fact; —*Eclectic Medical Journal.*

A Notorious Fact.—

We may issue a word of warning to medical men, especially those not long in practice with regard to the methods in vogue in some of the American insurance companies. Cases have come to our knowledge in which young medical men have been induced to insure their lives, by the promise of all the company's cases afterwards, and in which on inquiry several practitioners in the same town have been thus approached. The insurance having been effected, the insurer, sanguine of a modest increase to his income, too often finds that the company has already a referee to whom the examinations are pledged; or that if he does get a stray case, his premiums far exceed any pecuniary benefit obtainable.—*Medical Press and Circular.*

Compensations.—

In sanitary matters it might, indeed, be questioned if the objective progress of the last eighteen hundred years has compensated the subjective losses. Our drug-shops abound with novel remedies; our hospitals are managed by methods not dreamt of in the philosophy of the ancients; but there has also never been such need of medical skill, and the number of our diseases and disease-breeding poisons has multiplied faster than that of our reliable antidotes. The methods of our modern culture have developed the mind at the expense of the body, and besides, every step of progress in a direction that removes us from the simple paths of Nature is apt to involve a menace to health.—Doctor Felix Oswald, in *Health.*

A Popular Fallacy.—

While many parents think it better that children should have some diseases when young, such is an error. There is not one of the so-called children's diseases, except perhaps chicken-pox, but is liable to be followed by serious consequences, besides being some-

times fatal. In every way it is better to avoid all contagious maladies, and it is quite possible that in adult life persons may escape these diseases altogether, or if they have them it may be in a lighter form. The popular idea that grown persons have these diseases harder than children, is fallacious. Adults are better developed and have the judgment necessary to coöperate in the treatment, which is lacking in children.—*The Reflector.*

Stolen Grafts.—

In San Francisco an Irishman has brought suit for $25,000 damages for the loss of grafts taken without consent from his thigh and transplanted to the head of a Gallic patient. He claims that the grafts were taken while he was under an anæsthetic, given, as he was led to believe, to save him from the pain of an examination that was to be made. Mike McGowan, the complainant, "would not have cared so much only the skin went to patch up a d—d *Dutchman;*" besides the "old skin was brought from Oirland."

The Lynching Record.—

During the year 1893 there were two hundred persons put to violent death by lynching in the United States, an increase of one over the year 1892. Of this number, thirty were white persons and one hundred and fifty negroes (four of them women). Fifty-four were killed for rape, fifty-seven for murder; the rest for various smaller crimes. During the last twelve years nearly two thousand negroes have been shot, hanged, or burned to death by mobs.—*Exchange.*

Notoriety and Cheek.—

The Earl of Carrick has hæmorrhoids, or did have. He has written a letter to a patent-medicine concern, stating that he was thus troubled, but that the great remedy "touched the spot" and relieved him. Lady Keane has also given a certificate to the effect that her piles were cured by the same remedy. Times are hard now, and the clergy will find a dangerous rival in the nobility in the once lucrative employment of composing patent-medicine certificates.—*Medical Record.*

Too True!—

A physician, in speaking of the business side of the practice of medicine, says: "A doctor will trust people longer and more foolishly than any man on earth. He will go on trusting people for years, until they leave him on account of hating him because they have owed him so much and so long. Then they will go to another physician and pay him, with little or no hesitancy."—*Maryland Medical Journal.*

Religion and Measles.—

Doctor Gryglewiez reports an epidemic of measles occurring in the town of Jutrorchin. The inhabitants of the place are about equally divided between Catholicism and Protestantism, and the curious part of the epidemic was that only Catholic children were attacked, every one of the Protestants, as far as could be learned, having escaped.

A Bouncer.—

The skull of a mammoth human being of pre-historic times was discovered in southern California some time ago, and recently it was discovered that a cavity in one of its teeth was filled with gold in the manner employed by modern dentists.—*Free Press.*

The Russian International Medical Congress.—

The Czar of Russia has from the first shown great interest in the next International Medical Congress to be held at Moscow, and has signified his intention of contributing fifty thousand roubles toward the expenses.

Newspaper Anatomy.—

One of the New York morning papers gives a most interesting account of an amputation that was performed recently "half way between the knee and the thigh."—*Gaillard's Medical Journal.*

"Their Name is Legion."—

"Remedies that Cure" is the title of a book recently published in Paris. An account of the remedies that do not cure would make a portly volume.—*Medical Record.*

Mississippi Valley Medical Association.—

The twentieth annual meeting will be held in Hot Springs, Arkansas, November 20th to 23d inclusive. The Secretary is Doctor F. C. Woodburn, of Indianapolis, Indiana.

The Oldest Anatomical Specimen.—

This is a skeleton in the University of Basle, prepared by Vesalius in 1543.

Book Reviews.

PSYCOPATHIA SEXUALIS. By Doctor R. von Krafft-Ebing. Cloth; 8vo; pp. 436. Price, $3.00. F. A. Davis Company, Philadelphia.

This is a medico-legal study by the celebrated Professor of Psychiatry and Neurology of the University of Vienna, ably translated by Doctor Charles G. Chaddock, of St. Louis; and while it will be questioned by some whether it is justifiable to discuss the anomalies of the sexual instinct apart from general psychiatry, the fact remains that physicians and lawyers are constantly brought face to face with anomalies of sexual instinct, and that to both such aberrations are practically a *terra incognita*. Exact knowledge of the causes and conditions of development in such unfortunates, and of the influences leading thereto, is a prerequisite for rational prophylaxis and correct sexual education. The fact is, sexual perverts are oftener to be pitied than condemned: are too frequently the victims of unjust sentence and ignorant persecution when brought before the "majesty of the law;" and instead of incurring criminal prosecution should be relegated to the care of the alienist—sent to asylums instead of prisons.

While it may be admitted the volume may work some injury by implanting, in those of the laity into whose hands it may fall, a knowledge of sexual pathology, and even an interest in pornographic literature, it must be acknowledged the good that will be accomplished much more than outweighs the possible evil. The fact certain portions that are particularly revolting are given in Latin, is deemed in a great degree a safeguard, though this is a serious drawback to many physicians and jurists unfamiliar with this language, and to whom the unvarnished and unclouded tale would be of direct benefit; further, more members of the laity will readily interpret the Latin text in all its nauseousness than could grasp the same translated and couched in the technical terms peculiar to medicine.

THE ATLANTIC MONTHLY. Price, 35 cents; $4.00 a year. Houghton, Mifflin & Co., Boston.

The supply of fiction in the September number is more than usually large. Besides Mrs. Deland's "Philip and His Wife," chapters XXVI–XXIX, there are three stories: "Tante Cat'rinette," by Kate Chopin; "For Their Brethren's Sake," by Grace Howard Peirce; "The Kidnapped Bride," by Mary Hartwell Catherwood. "Old Boston Mary—A Remembrance," by Josiah Flynt, tells the tale of a strange old woman of the tramp class; Mrs. Louise Harrick Wall contributes a sketch entitled "In a Washington Hop Field;" "Up Chevedale and Down Again," by Charles Stewart Davison, is a thrilling narrative of Alpine adventure; Edith M. Thomas' "Rus in Urbe" is a delightful mingling of verse and prose. Other contributions are: "An Onondaga Mother and Child," by Duncan Campbell Scott; "The Religion of Gotama Buddha," by William Davies; "Ave Atque Vale," by Graham R. Tomson; "From the Reports of the Plato Club," by Herbert Austin Aikins; "A Morning at the Old Sugar Mill," by Bradford Torrey; "An Enterprising Scholar," by Harriet Waters Preston and Louise Dodge; "A Reading in the Letters of John Keats," by Leon H. Vincent; "The New Storm and Stress in Germany," by Kuno Francke.

DESCRIPTIVE AND EXPERIMENTAL PSYCHOLOGY. By Geo. T. Ladd. Cloth; 8vo; pp. 676. Price, $4.50. Chas. Scribner's Sons, New York City.

This is a treatise on the phenomena, laws, and development of human mental life by the well known Professor of Philosophy at Yale University.

It has been denied that psychology is a science, but such a denial appears to be the result either of ignorance, or too narrow conception of the definition of the term. This is a fact the author fully comprehends, and he therefore takes pains to prove that psychology is entitled to rank as a truly scientific study, and that the science of mental phenomena is evidenced by the test of actual and concrete life.

Briefly, the work gives a very clear and comprehensive picture of the mental life of the individual man, and also explains this life as it appears in the light of *all* the resources of modern *development*. In many instances the author has brought his subject up to the border line—so subtile as to be almost indistinguishable—where psychology touches the broader, all-embracing domain of philosophy.

The very completeness of the work renders it a desirable addition to every physician's library, and indispensable to the alienist and neurologist.

POCKET PRONOUNCING MEDICAL DICTIONARY. By George M. Gould, A.M., M.D. Morocco; long 32mo; pp. 317. Price, $1.00. P. Blakiston, Son & Co., Philadelphia.

Medical students and practitioners have often need of a small elementary word-book

that may be slipped into the pocket for hurried reference, and to serve as a passing reminder of the essential meaning of the more commonly used terms. Such books are too frequently made for the benefit of the publisher rather than for that of the consultant, and therefore err in a condensation so great as to result in vagueness and inaccuracy, and especially in the selection of too few words, the majority of which are decidedly antique in flavor. This little volume avoids these faults, particularly the last-mentioned, by containing about double the number of words found in the ordinary lexicons (12,000), and by being selected from the medical literature of the day. The addition of tables of muscles, nerves, arteries, the various micro-organisms, comparison of thermometric scales, and above all a dose table compiled directly from the latest and best works of materia medica, must also prove useful.

A System of Genito-Urinary Diseases, Syphilology, and Dermatology. Vol. III. By Prince A. Morrow, M. D. Cloth; 8vo; pp. 976. Price, $6.50. D. Appleton & Co., New York, and 90 Griswold street, Detroit, Mich.

The first two volumes of the work were devoted respectively to Diseases of the Genito-Urinary Organs, and Syphilology, consequently the third is entirely taken up with the discussion of diseases of the skin. Part First deals with Anatomy and Histology; Semeiology; Ætiology—pathology and diagnosis; and Treatment—constitutional and local. Part Second elaborates the different maladies, there being in all two hundred titles and sub-titles.

Illustrations, and notably chromo-lithographs, form a prominent feature, being employed wherever essential to elucidating the text, and these are of unusually high order of merit and accuracy. Finally, the volume is not only a complete text-book of itself, but the make-up of the entire "System" in all its mechanical features is commensurate with the intrinsic value of the articles. There is certainly no text-book, or series, of modern times, so complete or thorough, or that will give such good satisfaction to the physician.

Our Dumb Animals. Edited by George T. Angell. Cloth; small 4to; pp. 152. Price, 75 cents. The Massachusetts Society for the Prevention of Cruelty to Animals, 19 Milk Street, Boston, Mass.

The title of this volume is sufficiently indicative of its character and purpose—protection of weak and abused animality. We could wish a bound copy were placed in every hotel, library, and reading-room throughout the country; and to facilitate such distribution the publishers offer it at the extremely low rate of *eighteen cents* per copy—just enough to pay postage. Families desiring can, for 50 cents, have a copy of this most artistic and humane periodical every month in the year. The contents are suitable to all ages and classes, and being devoid of all cant or abstruse theories form most healthy reading.

Lippincott's Magazine. Price, 25 cents; $3.00 per year. J. B. Lippincott Company, Philadelphia.

The September number contains a complete novel entitled "Captain Molly," by Mary A. Denison. Three short stories of unusual merit are: "Josef Helmuth Goetz," by F. R. Benton; "The Sale of Uncle Rastus," by W. N. Harben; and "On Second Thoughts," by Lalage D. Morgan. Laura Smith writes of "Songs of the Battle-Field," Edward Wakefield of "How I Found the Baron," and W. T. Larned of "Head Lines." "Evolution of the Heroine" is by H. H. Boyesen; "Human Horses"—the jinricksha-bearers of the Orient—by Walter Furness; "Inconsistent Franchises," by F. K. Henry; and "Writers and Typewriters," by the editor. T. M. Coan, Frank D. Sherman, and Charles D. Roberts contribute the poetry of the number.

The Science of Homœopathy. By Charles J. Hempel, M.D. Cloth; 8vo; pp. 180. Price, $1.50. Boericke & Tafel, Philadelphia.

This volume is of especial interest in that it is, perhaps, the best *résumé* of homœopathy and its professions extant, its author being one of the most able exponents of the "*similia similibus curantur*" theory. It deals with "Homœopathic Law from the Standpoint of Vitalism;". "Inquiry into the Possibility of a Scientific Classification of Drugs;" "Inadequacy and Unreliability of Chemical Analysis in Determining Therapeutic Powers of Drugs;" "Homœopathic Law of Cure as a Cosmogonical Principle;" and "Pathogenesis and Pathology of Correlation of Artificially Developed Drug Diseases and Natural Maladies."

Sir Francis Bacon's Cipher Story. Vol. IV. By Orville W. Owen, M.D. Cloth; 8vo; pp. 90. Price, 75 cents. Howard Publishing Co., Detroit.

This volume completes the great historical poem, "The Spanish Armada," and delineates

the destruction by battle and storm of the mighty fleet that was the last attempt of Philip Second of Spain to subjugate England. Then follows a narrative of Bacon's life in France, in which the character and coarseness of the French Court are forcibly shown by a detailed account of his introduction and attendance, and the wrangling and scandals which occupied the time and conversation of the higher circles of society.

McClure's Magazine. Price, 15 cents; $1.50 per year. S. S. McClure (Limited), New York.

In the September issue Robert Louis Stevenson tells how he came to write "Treasure Island," and under what conditions the work was done; Cy. Warmar deals with "Irrigation in the West;" Robert Barr describes French boxes in "Fighting with Four Fists"—the Frenchman is always a kicker; Otto Lilienthal describes his "Flying Man;" Doctor H. P. Bowditch treats exhaustively of "Composite Photography." There are also short stories by Gilbert Parker and Florence Guertin. The portrait series are of Victorien Sardou and Madam Janauschek.

Braithwaite's Retrospect. By James Braithwaite, M.D. Paper; 8vo; pp. 340. Price, $1.50; $2.50 per year. G. P. Putnam's Sons, New York.

This semi-annual publication is too well known and too long established to demand any special praise at the hand of the reviewer. It is simply an epitome embracing every discovery and practical improvement in medical science during the six months prior to each issue, and consequently invaluable, especially to the busy practitioner. As a work of reference it is unsurpassed, and, moreover, it is one of the few journals that constantly maintain a high literary standard.

Bee Line Repertory. By Stacy Jones, M.D. Morocco; 32mo; pp. 210. Price, $1.00. Boericke & Tafel, Philadelphia.

This appears to be a condensed work of symptomatology, with designation of appropriate remedies. It is, moreover, arranged for alphabetic sequences, and there is added a very desirable glossary of abbreviations. Certainly the little volume contains a store of varied and valuable information for homœopathic practitioners such as cannot be found in any other work.

Therapeutic Brevities.

Agaricin.—This, also known as Agaric acid and Laricic acid, is the active principle of *Agaricus albus.* It occurs in minute white silky crystals soluble in alcohol, chloroform, and ether, but only slightly so in water; boiled with water it forms a gelatinous, strongly frothy solution, from which on cooling the crystals again separate.

Administered internally Agaricin has a decidedly anti-sudorific action, and consequently is highly extolled for the nocturnal sweats of phthisis, particularly as it does not tend to give rise to diarrhœa. It has also been added to such remedies as analgesin and pilocarpine to prevent profuse diaphoresis. The dose is one-sixth to one-half grain, which may be gradually increased to one grain; it is best administered in pill form together with Dover's powder, which rather tends to check any laxative action.—Care must be taken not to confound Agaricin with the alkaloid *Agarythrine,* which is a most virulent poison obtained from the same plant.

Agaricin has also been used hypodermatically in the proportion of one grain to the drachm of alcohol dissolved in one and a half drachms of glycerin; such, however, is liable to induce considerable pain and tumefaction.

Hyoscine Hydrobromate in Acute Puerperal Mania.—In 1892, while in charge of Telhara Dispensary, I had occasion to treat a case of acute puerperal mania in a multipara, the subject of repeated miscarriages. When called I found her in the eighth month of pregnancy and already in painful labor accompanied with profuse hæmorrhage. It was a case of placenta prævia with natural presentation of child. Finding her exhausted, delivery was accomplished by turning, and subsequent hæmorrhage arrested with a single dose of ergot. Two days after delivery, acute maniacal symptoms were observed. As chloral and bromide failed to quiet, Hyoscine hydrobromate in one-twenty-fifth-grain doses was given hypodermatically every six hours along with diffusible stimulants; these soothed effectually. She slept well on the second night, and after seven days, under gradually decreasing doses of Hyoscine, fully recovered. —Doctor S. M. Chinniah, in *Indian Medical Record.*

Scoparin and Sparteine.—Scoparius or broom contains two active principles, Scoparin and Sparteine. The former, called by Merck

"scoparic acid," is a crystallizable principle and acts upon the kidneys only. The latter is a volatile liquid alkaloid acting upon both heart and kidneys. The sulphate is the form ordinarily used, and it may be given in $\frac{1}{67}$ to $\frac{1}{12}$ grain doses (or even more under special necessity) every three or four hours. The presence of these two principles accounts for the powerful diuretic action of the old infusion of broom. Sparteine is valuable as a heart tonic in irregular action with tendency to failure. It acts through the spinal cord, and its effect continues several hours after the dose is given—hence caution is necessary to prevent cumulative action. It is one of the most satisfactory remedies in the treatment of exophthalmic goitre, promptly relieving the disagreeable symptoms; and given at the onset of a paroxysm of cardiac asthma, it promptly checks it. Other observers disagree, but the above seems to be the consensus of opinion of those with ability to judge.—*Alkaloidal Clinic.*

Strophanthus in Alcoholism.—Doctor A. P. Skwozow narrates three cases of periodical alcoholism treated by tincture of Strophanthus, seven drops thrice daily. Prior to administering, the patient experienced dreadful nausea and great provocation to vomiting, though without actual ejection of gastric contents. Two or three minutes after taking the Strophanthus a sensation of heat supervened, with profuse diaphoresis, when the nausea disappeared and general comfort succeeded. After the second dose the longing for alcohol disappeared.

The termination of the alcoholic attack entailed no hallucination or delirium, whereas during previous paroxysms the drunken period had always ended in mental disturbance.

Doctor Skwozow adds: "The action of Strophanthus is extraordinary in habitual drunkards. It seems to produce a reaction in their organism such as it does not accomplish in any other body, whether healthy or diseased."

Newbouldia.—A drug recently introduced from the west coast of Africa and partaking of the nature of ipecac and coto. Doctor J. F. Eastman (*Provincial Medical Journal*) found it of great use in malarial troubles, and of especial service in dysentery, where it seemed to act not only as an astringent, but as a tonic to the muscular coat of the arteries and to the entire intestinal tract. The first stage of dysentery was met by castor oil or a saline purge, after which the Newbouldia was given, from fifteen to sixty minims of the fluid extract (P., D. & Co.), frequently repeated at first, and as the dysenteric symptoms abated at longer intervals, until complete relief was effected.—*Medical Times.*

Digitalis in Pneumonia.—In pneumonia, Digitalis is the remedy *par excellence.* That recoveries from this disease will, and do, occur in greater numbers when treated by large and persistent doses of Digitalis than without its use, seems to be the growing belief. In connection with strychnine given in physiologic doses, the drug is administered until the pulse comes down to ninety per minute. If it can be kept there, recovery will, as a rule, ensue in a shorter time than by any other method of treatment. The cause of fatality in pneumonia is most frequently cardiac weakness as an adjunct of lessened oxygenation of the blood due to limitation of lung area.—Doctor Paulison.

Prunus Virginiana as a Heart Tonic.—The American Wild Cherry relieves the flagging and distended ventricle in chronic bronchitis, stimulates the flapping heart-chambers in the anæmic, and increases the muscular tone in subjects recovering from fever and other exhausting diseases. It is also given with great advantage in the irritable "convulsive" heart of the overworked of feeble physique; is especially useful in dilatation of the right heart, whether as a result of chronic bronchitis or of mitral stenosis. I use it more in private than in hospital practice, and perhaps no drug has brought me so much credit. —Doctor Seymour Taylor, in *Clinical Journal.*

Arasa.—This plant, indigenous to the tropical regions of South America, tastes very much like cascarilla, and appears to depend for its virtues upon an active principle situate in the root. Apparently it exercises a specific effect upon the menstrual function, especially noticeable in those cases where there is irregularity and excess, as in menorrhagia —in bad cases of menorrhagia it appears to accomplish more than any other known drug. Thirty grains of the powdered bark of the root boiled in four ounces of water should be given for several days preceding and during the menstrual period.—*Medical Times.*

Normal Liquid Belladonna in Epilepsy.—Doctor Fahmy writes the *China Medical Missionary Journal* that he finds in a combination of Belladonna and bromide a preparation

most satisfactory to himself and to epileptics generally, "affording almost complete immunity from attacks." The use of Belladonna in epilepsy is by no means new, but this combination appears to be more effective than either remedy singly applied. The fact Normal Liquid Belladonna is an assayed preparation, always of uniform strength, renders it especially valuable and available.

Ammoniated Tincture of Quinine.—In the *Pharmaceutical Journal and Transactions*, Mr. E. W. Lucas gives a formula for this preparation, which is so popular in Great Britain, as follows:

℞ Sulphate of quinine, 160 grains.
Proof spirit, 6 ounces.
Comp. tinct. of chloroform, } āā 20 drachms.
Solution of ammonia, }
Glycerin, sufficient to make 20 ounces.

Mix the quinine with the proof spirit, then add the chloroform tincture and ammonia previously mixed together, when the whole may be shaken up with the glycerin.

Thyroid in Syphilis.—Doctor Menzies, of the Royal Navy, claims especial success in the treatment of syphilis contracted in India, with Thyroid extract alone; the majority of cases were complicated with malarial fever and bowel complaint. He declares also that "externally used for insufflation and dusting purposes, the powdered extract was used for its hygroscopic and absorbent properties." He regards the remedy as a powerful skin tonic, and if not a complete succedaneum for mercury, at least a powerful adjuvant thereto. From five to twenty grains are prescribed daily in water.

Creosote in Phthisis.—In *Gazeta Lekarska*, Doctor Sokolowski remarks that Creosote is the least dangerous of all drugs recommended for this malady. He believes it, moreover, to be valuable as a stimulant to digestion, both by irritating the mucous membrane and disinfecting the swallowed sputum; he likewise deems it a most valuable expectorant, but adds "in no case can it be regarded as a specific." He prefers to employ in doses of one to ten grammes daily, in strong solution.

Effect of Mercury on the Kidneys.—Doctor Welander, as the result of observation upon ninety-seven cases of syphilis, finds that the elimination of Mercury is accompanied by greater or less renal irritation, manifested by casts in the urine; that these casts increase in proportion to the length of the treatment, gradually decrease after its cessation, and generally disappear a month or six weeks later, leaving no injury, either temporary or permanent, to the kidneys.—*Hygiea.*

Cascara in Rheumatism.—In the Louisville *Medical Monthly*, Doctor Cannon reports sixteen cases of rheumatism treated by Fluid Cascara sagrada aromatic in teaspoonful doses every three hours until the bowels moved freely, then fifteen drops every two hours. All recovered in a few days, and he declares: "Any one who tries this remedy in rheumatism cannot help but be satisfied with the quick results obtained."

For Continued Syphilis.—

℞ Red iodide of mercury, 4 grains.
Iodide of potassium, 4 drachms.
Tincture of iodine, 2 drachms.
Distilled water, to make 8 ounces.

A teaspoonful in a wineglass of water three times a day, one hour after each meal.

—Doctor Joseph Jones.

Management of Sciatica.—Doctor Benj. H. Brodnax declares he obtains almost instant relief in sciatica, from the hypodermatic injection of five to ten minims of a solution of twenty drops of Carbolic acid to the ounce of water. He recommends the injection being carried down to the seat of pain.

Freckle Ointment.—

℞ Oleate of copper, 1 drachm.
Petroleum, 2 ounces.

Apply twice daily.

—*Southern Clinic.*

A Hint on Anæsthesia.—The *Medical Arena* states that a drachm of amyl nitrite added to a pound of chloroform constitutes a superior anæsthetic, especially adapted to weak heart, and tends to avoid the stage of excitement.

Oranges and Alcohol.—It is asserted that the craving for alcohol may be greatly diminished by the use of oranges eaten to the number of six or eight a day.—*Medical Record.*

Gonorrhœa. — Kava-kava, fluid extract, thirty to sixty minims every four hours, controls and effectually relieves gonorrhœa in from fifteen to thirty days.—*American Doctor.*

Normal Liquid Conium in Torticollis.—Doctor Wharton Sinkler recommends fifteen to twenty drops three times a day, gradually increased to sixty drops if necessary.

Medical Progress.

PHYSIOLOGICAL ACTION OF STRYCHNINE.—Rokitanski found that injections of Strychnine, previous to division of the cord just below the medulla, prevented respiratory movements from being abolished, or caused them to reappear when they had stopped after section.

Gamper, by observations upon dogs, discovered Strychnine increases the amount of gastric juice, which is corroborated by Hofmeister and Vohl, who further add it increases the number of white blood-corpuscles, and that these corpuscles serve a very active part in the process of assimilation and nutrition, taking up the peptone formed in digestion, and carrying and distributing it to the tissues of the body.

The dose of Strychnine ordinarily administered is too small to prove efficient. As a tonic, alone or in combination, it should be not less than one-forty-eighth of a grain to an adult of medium weight; but where a more specific effect is desired, as upon the heart or respiratory organs, as high as one-twentieth of a grain three or four times a day, or oftener, may be given without untoward result, even though administered for some time.

Recent disclosures of the lines of treatment pursued in quack institutes, only serve to emphasize what has long been known of the value of this drug in the treatment of inebriety. High praise must be given to its effect upon the chronic alcoholic; appetite is restored, sleep induced, and the varions nervous symptoms lessened even where a moderate indulgence is continued. In many cases of neuralgia, more especially in anæmic individuals, it will ofttimes not only relieve, but absolutely cure. In convalescence from acute fevers it is the typical tonic, improving digestion and assimilation, and strengthening heart action.

Doctor W. H. Porter, in a recent lecture, defined a cardiac stimulant as "a remedy that calls into action the intrinsic or stored-up motor power of the cardiac muscle, but without directly affecting its nutritive condition." Of cardiac tonics he said, their "ultimate result is the development of a higher degree of muscle power by the formation of an increased volume of muscle protoplasm, and not alone by simply calling into action stored-up motor power at the expense of the vitality of the muscular elements." In the latter class he places ammonia, atropine, opium, and strychnine, adding also that digitalis poisons the heart-muscle. Some years ago he became dissatisfied with the final results obtained from the use of full doses of digitalis in heart affections, and since has relied almost entirely upon Strychnine alone or with ammonia, obtaining most satisfactory results; "the tone of the heart-muscle is improved, and compensation effected and prolonged beyond the period of administration, because the amount of contractile tissue is increased. A building-up process is the result, not alone of the effect upon the circulatory centre, but because the nutrition of the heart, as of the rest of the body, is improved by reason of the action of the drug upon the digestive process."

In neurasthenia, in which the digestive function is always imperfect, as also in chronic indigestion of all types, Strychnine is of great service; it stimulates the digestive organs to increased activity, and then, by its effect in the multiplication of white blood-corpuscles, provides means for the more rapid and effective distribution of the product of digestion to the tissues for their nutrition. This is, to a considerable extent, an explanation of its usefulness in all conditions in which it is prescribed with benefit.

Experience in diseases of the respiratory organs has not been so extensive as in heart and stomach affections, but sufficient to evidence its value in chronic bronchitis and pulmonary tuberculosis. Just how much of the benefit obtained may be referred to improved circulation and nutrition, and how much to the direct effect upon the respiratory centre and the pneumogastric nerve, is not certain. By its use, respiration becomes slower and deeper, cough and the catarrhal secretion are lessened, and the general condition of the patient is improved.—*Virginia Medical Monthly.*

VARIOLA, VARIOLOID, AND VARICELLA.—Varicella is often accompanied by considerable disturbance of the general economy; it is not necessarily a disease of childhood only, at least not of very early childhood. Sometimes it is to be distinguished only with difficulty from mild cases of varioloid or modified smallpox in those who have been vaccinated; under some circumstances it cannot be distinguished with certainty.—This has reference to the diagnosis only, and of course not to the real identity of the diseases.

Up to the stage of eruption, variola is either not contagious or less so than later; light varioloid is much less so than severe or very severe variola. Many unvaccinated individuals show a lessened susceptibility, while in others the susceptibility is so great that even one or two years after vaccination they

are liable to the disease. Yet in the majority of individuals vaccination protects for seven years; in a larger or smaller number considerably longer. Protection begins about eight days after successful vaccination. Vaccination after infection does not protect, but it is possible the course of the disease is favorably modified if the vaccination has been performed at least seven days before the eruption.

Vaccination laws are insufficient in so far as they permit many children to remain a long time unvaccinated and thereby become possible sources of an epidemic. The more persons unprotected by vaccination and by re-vaccination, the greater is the danger in a community of an outbreak and of the spreading of an epidemic.

Isolation and disinfection are the more unsuccessful, in combating the disease, the more unvaccinated and improperly vaccinated persons there are in a neighborhood; an immediate vaccination of all such is necessary.

Energetic ventilation, and the exposure of persons who come in contact with the patients to fresh air, diminish the danger of contagion. Steam disinfection of the effects removes the danger from that source. Disinfection by sulphur alone may be sufficient. —DOCTOR BIEDERT, in *Boston Medical ana Surgical Journal.*

CYANIDE POISONING.—The killing of a "rogue" elephant by cyanide of potash has drawn attention to this poison in a way which may prove disastrous, through the suggestions made to would-be suicides. Already the cyanides are pretty well recognized as most deadly poisons, and in England they rank second in the list of causes of criminal, suicidal, or accidental deaths, the mortality being about forty annually from this drug. Men kill themselves with it oftener than women. In statistics collected by Falck, covering twelve years, he found fifty-one cases of cyanide poisoning (of which twenty-nine were from potassic cyanide), nine of hydrocyanic acid, five of oil of bitter almonds, and three of peach-stones. The cyanides are rarely used for purposes of murder, on account of the strong smell and perceptible taste. The minimum fatal dose of hydrocyanic acid is about one grain, and that of potassic cyanide two and a half grains. Hence the elephant's dose of three ounces was certainly a liberal one. Cyanide kills usually with great rapidity. It appears to produce a condition resembling asphyxia, with carbonization of the blood, convulsions, and paralysis.

If poor Tip had been able to avail himself of the latest scientific discoveries, he could perhaps have warded off his (we should perhaps say) timely end, for Doctor Julius Van Kossa of Budapest announces in the *Centralblatt für die Medicinischen Wissenschaften* of April 28th that he has discovered an antidote to the cyanides; this is no other than the familiar permanganate of potash. If after taking the poison a solution of the permanganate be administered, lethal doses are found to have no effect.—*Medical Record.*

IS THERE A PREVENTIVE OR CURE FOR HYDROPHOBIA?—The experience of two thousand years has proven beyond a doubt to every person who has studied the history of hydrophobia, that cleansing the wound thoroughly with caustic, or even incising it without caustic being afterwards applied, is a perfect preventive against rabies. No, not every person now. People who have institutes, like Pasteur in Paris, Gibier in New York, and C. N. Hewitt at Red Wing, to cure or rather prevent rabies in human beings, and who advertise the world over for persons to come to them, have seen that it is important to go back on their former strong belief in the preventive means so long successful—so successful, indeed, that the great veterinary surgeon Youatt declared emphatically that the means spoken of, if done at any time previous to the actual development of the disease, would, if properly used, be successful in preventing further trouble. Yes, they not only declare these means not only useless, but ofttimes injurious. What motive inspires them? I need not say—a word to the wise is sufficient. Their acts speak as loud as their words. Despite their boasts, Fry, Stoy, Emery and the mad-stone can all show greater success.—*Medical and Surgical Reporter.*

THE MAMMILLARY BODY IN MAN.—Doctor De Sanctis, at the recent Congress in Rome, presented the following conclusions:

The *corpus mammillare* of man is developed from two ganglia, the median and the lateral; the latter has no connection with the *pedunculus corporis mammillaris* (*fascia tegmentalis* of Meynert), but is in relation with the *columna fornicis*, which arises in great part from it, and, to a lesser degree, from the median ganglia:

The median ganglia of the *corpus mammillare* is in relation with the complexus of the fascia of Vicq d' Azyr and of the *fascia tegmentalis* of Gudden:

The medullary capsule (Gudden) of the *corpus mammillare* is in relation, by its ventral

portion exclusively, with the *columna fornicis*, and by the median portion in great part with the fascia of Vicq d' Azyr—*fascia tegmentalis*—in less part with the columna:

The *rete endomammillare* is formed almost wholly from the *columna*, while the two ganglia are given off from the fascia of Vicq d' Azyr:

The *fascia* of Mahaim has no relation with the fasciæ of the *columna fornicis*.—*Medical Week.*

ETHER VERSUS CHLOROFORM. — Doctor Micheli, of Bologna, after a careful study of ether narcosis in Brun's clinic at Tübingen, has accepted the views of those who give the preference to this form of anæsthesia. He groups the objections to ether as:

Imaginary inconvenience—intolerance of ether in infancy and old age:

Inconveniences, once real, but done away with by improvement in administration—such as incomplete muscular relaxation and a prolonged stage of excitement:

Inconveniences possessed by ether in common with chloroform—temporary albuminuria, nephritis, vomiting:

Inconveniences proper to ether alone, occasionally present,—such as exist as the result of lesions of respiratory tract, compression of trachea, or goitre, and employment of the actual cautery in operations upon the face or neck.

Micheli would not banish chloroform altogether, but employ either it or ether according to the indications present in each individual case, giving the preference where there is a choice, to ether.—*Medical Record.*

SARCOMA OF THE KIDNEY.—Doctor T. Ferretti, of Rome, reports a case of sarcoma of kidney in which the growth was exceedingly rapid. The morbid process began in the endothelial cells of Bowman's capsule, and soon induced atrophy and destruction of the Malpighian bodies. The glomeruli increased in size, and when they had attained about four times their normal volume, a mucous degeneration took place in their centre, having the appearance at times of a myxoma; many of the glomeruli gradually became confluent. The straight and convoluted tubes resisted the longest the invasion of the round cells of the sarcoma. The simultaneous development of the tumor in a very large number of glomeruli would point to a common cause invading different points. A careful examination failed to reveal the presence of coccidia, which are, in the author's opinion, in any case only degenerative bodies, and in no sense the cause of the sarcomatous process.—*Medical Record.*

IMPLANTATION OF DECALCIFIED BONE.—LeDentu cites the following:

A girl of twenty-one years presented extensive destruction of the os calcis, astragalus, and several other tarsal bones, the disease being so deeply seated that amputation was about to be performed. The whole os calcis, astragalus, and scaphoid bone were extirpated, and the cuboid curetted. Two large pieces of decalcified bone were placed in the cavity, the one crosswise corresponding to the anterior portion of the foot, and the other and larger one in the direction of the calcaneum. The soft parts were curetted and the wound sutured, with drainage. Four months later there was complete recovery, and she went about with a salicylate-of-soda bandage. In twenty months the foot was firm and solid, and the functions of the newly formed tibio-tarsal joint were satisfactory.—*Norsk Magazin for Lægevidenskaben.*

INGESTION OF SPONGE.—I have fed guinea-pigs, kittens and puppies with bits of sponge prepared in various ways, wet and dry, cooked and raw, fried in oil, cut in large pieces and small, but never observed injurious effects. In all cases the sponges were passed in from one to three days after their ingestion,—unchanged in the *Carnivora* but slightly acted upon by the digestive fluids in the *Herbivora*. The popular belief in the injurious action of sponge, which is even shared by some physicians, is wholly erroneous. Of course, if a piece of sponge were forced into the larynx it might produce suffocation, but in the digestive tube it is innocuous.—DOCTOR C. RAIMONDI, in *La Riforma Medica.*

EXTRAORDINARY TEMPERATURE.—Richet recently called the attention of the Biological Society of Paris to a remarkable case of hyperpyrexia in a woman suffering from intermittent fever. While the temperature in the morning was no higher than 102° F., in the evening it ascended to 113°. Upon two different occasions it rose to 114.8°. The utmost care was taken to avoid deception. Moreover, under the influence of quinine it fell to 96.8°, and when the quinine was suspended the mercury rose again to 118.8°. After a fresh exacerbation of longer continuance the temperature fell to normal and the patient recovered.—*La Médecine Moderne.*

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Original Articles.

WATSON AND BELL'S SECTION—A REMINISCENCE OF EARLY PRACTICE.

BY EDWARD WORTHINGTON, M.D.

Yes, incredible as it may seem, our world of "Little Peddlington on St. Francis" was, at the time I write of, only a good-sized village, but our first railroad—we have four or five now—was in course of construction; indeed, the rails were laid up to within six miles of us. Gravel trains were in full swing, ballasting the road, and when the air was moist we could hear the glad sound of the whistle. We do not listen for it now. We are rather tired of it. Every evening in the bar-room of the "Gog and Magog" were related wonderful accounts of how many ties and rails were laid and how many spikes driven that day; and if perchance an enterprising contractor drove up to town—the boldest of us were just beginning to speak of "Our town"—he was treated with marked attention, and his remarks as to progress listened to with great pride.

Fathers of families used to extemporize little picnics for the benefit of their wives and families, down to some ground commanding a view of the St. Francis Valley, up which the train must come, and return jubilant if they were fortunate enough to hear a whistle or see a puff of smoke from what was to bring them stores of wealth and make everyone around them prosperous and happy.

It is true we already had daily communication, by stage, both ways, with the outer world — four spanking horses in busy, and two in slack times, changing every ten miles—doing the 90 miles to Port St. Francis on the St. Lawrence, or *vice versa*, in nine hours. Yes, indeed; and I had almost forgotten we had a daily stage to Montreal, and a very "weakly" one to Quebec. But what were all these to a railroad? Still the old coach days had their charms. As the hour for passing came round, the children ran out, hoping to pick up a drop-letter or a parcel, or a message from the driver, and at the stage-houses a crowd would collect and survey the passengers and baggage and pick up the news of the day, and local gossip, from Ike Cutter the stage-driver. And at Mrs. Spicer's—the half-way house—where the passengers were regaled, while the horses and stage were taken over the ferry in a scow, there was opportunity for interchange of news. Ike Cutter and Mrs. Spicer were two famous personages on the route—the first for his talking powers, the second for her native tea, and gooseberry pies when in season.

But those old stage-coaching days are gone, and with them all the romance of travel, and we have in their place only the discordant shriek of the engine, the shrill cry of "All aboard!" a rush, another shriek, and off again. No time for sentiment or tender farewells.

This road was the St. Lawrence and Atlantic, the first connecting iron link between Montreal and Portland, Maine; the parent of the Grand Trunk Railway and, it may be truthfully said, of the whole railway system in the Dominion of Canada. And this road was steadily making its way to "Little Peddlington on St. Francis" in the summer of 1851.

Yes, when this great railway was completed to Richmond, within 24 miles of our town, a formal opening was announced, and a great banquet given, at which champagne flowed like water, and eloquent speeches were made—"to oil the machinery," it was said. The glories of the two countries were enlarged upon. People divided by a mere imaginary line—of the same blood, speaking the same language, inheriting the same glorious ancestry—were to be bound together in bands of iron—railway iron—for ever!

I drove down with my friend Doctor S. T. Brooks, then of Little Peddlington, but now of St. Johnsbury, to see the great Anglo-Saxon race—with a slight dash of French-

Canadian—bound in perpetual amity and interest. Portland and Montreal for ever! The crowd was immense. When the train came in, decorated with the flags of the two countries, it was hard to keep the country people off the track. While the railway magnates were feasting, the manager of the road invited the folks to pile in for a ride. Such a rush as was made for places! and in the midst of it a young fellow named Goodwillie, a son of one of the contractors, in endeavoring to keep order, stumbled just as the train started; he fell with his arm outstretched on the track, and two wheels passed over it just below the shoulder.

The cry was, "Get a doctor!" but no doctor could be found. At last I was recognized in the crowd and called in, to find my patient lying on a straw "tick" on the floor, in an adjoining house. What on earth was I to do? No local man to be found—no instruments either. At last an old physician turned up. No! he had no surgical instruments, but he had a knife, made by the village blacksmith out of an old file; it was the pig-sticker of the village, and he thought it was in good order, so off he drove for it. In his absence Doctor Brooks and I got together silk for ligatures, bandages, old sponges, and a carpenter's tenon saw. The first intimation we had of our friend's return was seeing him seated in a chair, in front of the patient, putting a keen edge on the knife, on a stone he had brought with him. It was a cold-blooded proceeding, but we forgave him, as he had brought with him, likewise, two curved needles, a small pair of forceps, all rather rusty, and some sticking-plaster.

On examination I found the humerus splintered into the joint, so I at once made my flap from the deltoid, disarticulated the head of the bone, removed the spiculæ, and, using a sharp-bladed pen-knife for a scalpel, and the forceps, passed my armed curved needles under the vessels and so secured them; and a sweep of my butcher-knife, with a little trimming of the mangled flap, completed the operation. The wound healed by "first intention," and the young fellow drove up to "Little Peddlington on St. Francis" on the twenty-first day. This was on October 15th, 1851.

In the early days of the settlement of the country, physicians were few and far between, and the work most laborious—the roads in many places impassable even to the old-fashioned New England sulky. Few men of the present day would relish the idea of being called upon in the middle of the night to go some ten, twenty or thirty miles in the saddle—over good roads and bad, over hills and through swamps—and be called upon at the end of the journey to set a fracture, reduce a dislocation, or operate, as I once did for strangulated hernia, in a poor log-cabin, by the light of one small lamp and an old fashioned, perforated-tin, stable lantern.

Still the life of a country physician was not without its attractions. Riding or driving along, he had ample time and food for meditation, and time and opportunity for throwing a "fly" in a wayside brook—on his way home, of course. I never distinguished myself with the gun; in fact I never shot a bird until I was over thirty; I had a disappointment in early life which disheartened me:

I was out after wild pigeons in a buckwheat field. After some time I saw a solitary bird on a small tree, just over my head. Taking deliberate aim I fired. When the smoke cleared away, there sat the pigeon. Before shutting my eyes preparatory to pulling the trigger, I had observed that the bird sat with his back to me; now he faced me, looking inquiringly down, as if to say: "Hello, what is the matter with you?" I loaded again carefully, and fired; not a feather flew; then "pigeon" left, disgusted. I, too, was so disgusted that I did not take a gun in my hand for years; not that I considered guns dangerous—especially to pigeons.

This railway—which I had almost forgotten—was making its way steadily to Little Peddlington on St. Francis, bringing with it a host of navvies of all nationalities, mules and dogs by the score, goats and poultry. Rough wooden shanties grew up like mushrooms: stores, boarding-houses, and "dog's nests" where bad whiskey was sold at champagne prices. Of course there was at once a great and increasing addition to the population, and the doctor was in great demand. One lovely evening in July, 1851, I was on my way to see a patient some six miles from home. I was on horseback, and had got over four miles of my journey, when I met a

"navvy" riding and evidently in a hurry. As he was passing he suddenly drew up, saying, "Are you the doctor?" "Yes, I am a doctor." "Well, then," he said, "I'm after you. You are wanted at Watson & Bell's Section, at once." "Yes," said I; "who is sick—Watson, or Bell, or the Section?" "Oh, it's the Missus herself." "Yes, but whose Missus?" "Sorra one of me knows; but you'd better hurry up, anyway." I explained to my friend that I was on my way to a case of a probably similar character, and could not possibly go with him—he had better go on and get someone else. No, he was told to get me! So it was finally settled between us in this way: I had only two miles further to go, and when I got to the end of my journey might find my patient better; at any rate, the moment I was at liberty I would go on to Watson & Bell's Section. And so we parted—the evening beautiful and bright and still, but some black, suspicious-looking clouds were looming up in the distance.

On arriving at my patient's house—whose husband, for convenience, I shall call Mr. Nathan—everything was in a state of repose. On explaining the situation, Mrs. Nathan said, most considerately, that she might not require my services before morning. Yes, surely, I had better go at once to the other party, and *if she should* want me in a hurry—why, Nathan could go over for me; it was a very short distance by the "old portage road!" Nathan explained to me the intricacies of the "portage" so clearly that I determined to continue my journey by it, as it would shorten my route by three miles.

The early settlers, in the absence of roads, had to take their wares, consisting chiefly of "pot and pearl ash," to market in flat-bottomed boats down the St. Francis, where at Brompton Falls a long portage had to be made to avoid some dangerous rapids. The railway was being built close to the river, and the highway was back from the river about a mile. To go from Mr. Nathan's to Watson & Bell's Section meant a ride of a mile to the highway where I had left the messenger; a mile and a half down the highway; and then a mile back again to the river, over a newly cut-out path—*or* about three-quarters of a mile over the old portage, if one could only get through alone, and at night. There was the "rub"—alone—and at night, over an unexplored country. However, the calls of humanity decided me in favor of the short cut. In a reckless moment I took the portage road—or rather, I took a portion of it that night, and the rest I took—several times—the next day.

My instructions at starting were, as is usual in such cases, delightfully plain and simple. I had only to cross the adjoining meadow to the old Adams homestead—some 600 yards—and there strike the "portage." A large pine tree marked its entrance. True, the portage had not been used for fifteen or twenty years, and had been covered with a thick undergrowth, which had been cut down only a few days before, and some heavy teams had been driven through. I might expect a few mud-holes, and must be particularly careful not to get off the path, as the railway was very close to it for the whole distance. All of which was very comforting. Just as I passed the big pine tree, and entered the portage, some heavy drops of rain fell, and in a moment the moon went out, the fountains of the great deep were opened, and down came the deluge. Dark? I never saw darkness before. As an experiment I pulled out my white handkerchief and waved it before my face; no, I could not see it. As we advanced, my horse could not resist the temptation of having a bite at the green leaves beside him; and as the first mud-hole declared itself, two long boughs loaded with mud met me, one on each side, plastering me from head to foot, and carrying off my hat. I was sure the horse was off the path, particularly as I had lost my temper and had pulled at his bit. The proper thing to do, under the circumstances, would be to get off; and as I always did—and do—the proper thing, I dismounted and tied the horse to one of a clump of seven white birches—they might have been black that night, but I knew they were birch from their bark; and then I ventured off, like the king's son in the story-book, but without the good fairy, in search of my fortunes and my lost hat! I groped carefully with both hands for mud-ruts, but met only leaves and pools of water. Perhaps I had better go back to the horse and try another point of the compass; but alas! I could not find my horse! I had tied him, to use as a strategic

base from which to explore; now my fixed point, horse, and hat were gone. I listened intently for the least sound from my horse. Evidently he was listening too, for he never stirred; he had never known me to do anything so insane before, as to get off his back in a pelting rain and grope about in the bushes; he did not know of the loss of my hat, or of his own importance to me at the moment.

At last my outstretched arms grasped his hind legs—there was some comfort in that. Some comfort, too, in the fact that he did not resent my familiarity—he merely neighed in an encouraging tone. Then I went to his head, and, after due consideration, started off again for a point exactly opposite, as I supposed, to the one I had previously taken—off in search of mud-ruts, wheel-tracks, anything suggestive of a path—or a hat. No! in five minutes, in accordance with the well known principle governing revolving planets, and even smaller bodies, I came back to the same horse and the same clump of birches. I knew them, for I counted them, and their number was seven! Again and again I tried this, with the same result; then I thought I would sit down and rest, but what could I sit on? I found a smooth log—smooth on the surface, but treacherously rotten within, for when I sat on it it collapsed and dumped me into a pool of water alongside. It might be supposed that this would have thrown a damper upon my feelings, but it did not—they had been thoroughly acclimated before. Here a happy thought struck me: why not get into the saddle and sit there? Why had I not thought of this before? I mounted, leaving the horse tied. Unfortunately, he took this as a signal for "quick march," and round and round he went before I could get down, swishing the horrid, wet and mud-laden branches over my face—all over me.

By this time I had lost my temper—all I ever had. It was of no use to me, any way, so I thought I would try the meek and lowly and long-suffering plan for a while—but that was no better; then in sheer desperation I got into the centre of the clump of trees—silver birches,—leant against one, put my arms around the others, and stood there until the day began to break, at three o'clock. I had entered the portage at 10 P.M. I must have dropped into a doze, for the moment I opened my eyes there was my hat, a soft felt one, well up on the horse's nigh fore-leg—he had stood in it so long the foot had gone through, and there it was encircling his fetlock like a frill; otherwise it was not badly damaged! The crown was demoralized, but the brim—well, it might do for something; it might do for a masquerade! The rain still came down—what else could it do? it could not go up. There it was; up or down made no difference to me—it had done its worst.

My feelings were centred in what my poor patients were doing in this my cruel desertion. I untied my horse, mounted, and was about to start, when another difficulty cropped up. Where was I to go? What direction was I to take? I had started for Watson & Bell's Section. Clearly it was my duty to go there first, but where *was* Watson & Bell's Section? The "Falls" roared beside and around me! If I turned my right ear, there they were; if I turned my left, there they were, just as loud. The rain and the fog were so dense; the river was anywhere; the path gave no indication. To my surprise the horse had barely left the path—he was "half-and-half." Which half was his fault? and which mine?

However, there were two ways, a right and a wrong. I took one, and a few minutes brought me back to the big pine tree where I had entered the portage. I had taken the wrong one, and had only to turn round to be right. As I rode back I was not surprised that I had lost myself. During the previous heavy rains the heavy cart-wheels going through pools of mud had left drooping branches in graceful curves, just as from wet snow in early spring—only this was not "beautiful snow," it was Mud!—As I entered the line of shanties the dogs began to bark and the cocks began to crow, but there was not a light burning or a "navvy" astir. I steered for the biggest shanty in the row, and knocked at the door with my riding-whip. The whole place seemed to be in a state of profound repose. I was indignant to think that I had gone through such tribulation for people so indifferent as to have slept through it all. At last a door opened, and a cross voice said: "Yes, this is Watson & Bell's Section. What do you want?" "I am the

doctor." "Oh, indeed, you are the doctor! Well, you don't look much like one." But she took me in, and a man took charge of my horse. On a kind of shelf, like a half-section in a Pullman car, lay my patient, fast asleep; she had slept soundly all night, but she woke up in the middle of my story, and she and her four friends—"ladies in waiting"—went into peals of laughter at my forlorn condition.

Modesty was thrown to the winds, and I was tenderly reduced to the condition of primeval man, and my garments hung up to dry by the hastily lighted kitchen fire. Then I was arrayed in an inside feminine garment —I hardly know what to call it—shaped like a sack, and reaching down to my heels, with frills round the neck and wrists; a petticoat; and a light shawl over my shoulders. A buffalo robe, with the fur side up, was spread on the floor, and this, with a pillow and a light quilt, completed my equipment for the night. No sooner did my head touch the pillow than the room was filled with the most bewitching harmony.

" . . it came o'er my ear like the sweet south
That breathes upon a bank of violets."

One sweet—inexpressibly sweet—voice led, followed by a chorus of one hundred voices in angelic strains. Then I was lifted up, up, by graceful forms arrayed in garments similar to my new ones, and wafted through hymeneal groves, fanned by cool zephyrs, and placed in a bower—of silver birches, seven in a clump—upon a bed of roses! My temples and limbs were bathed in ambrosial cologne, and the graces blew sweet breathings, and gently touched me with their lips; then a voice came to the door—not of the bower, but of the miserable shanty—and shouted: "Is this Watson & Bell's Section?" "Yes," answered someone. "Is the doctor here? He is wanted right off at Mr. Nathan's. You tell him to hurry up." I had just floated into a sweet dream; and to be disturbed in this rude way, and rushed from Elysium into that hateful portage, was too dreadful. If I did not say "d——n it," I thought it. It is not likely that I merely remarked, "Well, this is too awfully sweet." Retaining my *inside environment*, I pushed my way bravely through the sodden sleeves and legs of my own garments, assisted by the four "ladies of the bed-chamber." My riding-boots I could not get on, so I tied them together, threw them over the saddle, and rode off in my stocking-feet. It was still raining hard, and a heavy fog covered everything. It was early—not more than four o'clock.

When I got fairly through the portage, I put my horse into a sharp gallop, and had a narrow escape for my life near the old Adams homestead. At a curve where the railway was some ten feet below the path I was riding on, the rain had caused a landslide, carrying the path into the railway below. In an instant my brave horse caught the situation, and turning sharp he cleared at a bound the low fence to the right, the bank crumbling under his heels as he took the jump. The danger was over before I saw it. I got off his back and kissed him, and promised him a lump of sugar. A foot more and we would have been over the dump and seriously injured if not killed.

Arriving at Nathan's, and giving prompt attention to my patient, I then addressed myself to the agreeable task of refreshing the "inner man." The baby was being dressed, the table was laid with a beautiful white cloth, before the open door, and the family were waiting for me to come to breakfast. I had a "licking of promise," in the shape of a wash. There was no carpet, so it did not matter about the drip from my clothes. I began to relate my adventures to the women —who could not for the life of them keep back their laughter—and I had just decapitated my first egg, when splash, splash, splash, came a man and a horse to the open doorway, and the same old story of Watson & Bell's Section was repeated.

Nathan's folks were very religious, so I could not swear. If I had been a "class-leader" of some persuasion, I might have given vent to my feelings by "making a prayer," but I did not feel equal to it. I was crushed, utterly, and subdued. The horse was brought round, and off I rode, wet, hungry, and weary, for Watson & Bell's Section. As I got off at the door I heard the first cry of the "infant," and the mother's pleasant welcome: "Well, Doctor, you are just in time."

I remained at the Section an hour, and rode back to Nathan's—where I had promised to return to breakfast. My horse was put up

and fed, and Nathan's mother, a dear old woman of—over sixty—kissed me and sent me to the spare room, where she had spread out a suit of her son's clothes for me to dress in: everything—even the old-fashioned shirt-collar and *stock*—even a substitute for the elementary garment I have referred to but was unable to name. Then I was placed before a good breakfast—fresh eggs, fresh brook trout, buttered toast, and johnny-cake! I did my duty nobly. My worst enemies have never had just cause to reproach me—in that line.

In the mean time I thought of my home in "Little Peddlington on St. Francis."

Nathan's clothes may be described as being *nut-brown* in color, old butternut dye, and of linsey-woolsey texture. Nathan was six feet in height. Even with high heels I never could beat 5 feet 7½, so the clothes were long enough. There was a tall, silk, Sunday hat, old in style—it might have been his grandfather's. Altogether I might have been taken for an itinerant preacher—all except my legs. I could not get my riding-boots on, but I managed to get my feet into the legs. After mutual farewells and "many happy returns," I started for home. Then it was that I became aware of the defect in my legs; they—or rather my boots—wabbled about, toes in and out, and round and round, every way, making my legs look as if they did not belong to me. I let out my stirrups to the length of taking in my boots, which only added to my stature. A riding-master would have ordered me to dismount at once. My toes still continued to wabble and gurgle with water, but at last I got home—about nine o'clock. My wife stood at the front gate as I rode up, and, seeing me about to get off, she said: "The doctor is not at home, sir."

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At the time of which I write, Little Peddlington rejoiced in having only four doctors! and with one exception not another within twenty miles. One was a very old man, the second many years my senior, and the third only a few years older than myself, so that the greater share of the night work fell to me—rather more than was pleasant, more than was always safe. Ill-natured people called us respectively "Battle," "Murder," and "Sudden Death," for no sufficient reason except that one drove a "pale" horse. The fourth man had no special designation.

One midsummer night I was called up by a man named Lovell, from Brompton Mills, some six miles from Little Peddlington, to see his wife in a case that admitted of no delay. "All right; I'll call my man up to get the horse, and be right after you." "No," said Lovell, "jump in with me; I'll bring you back, and we will lose no time." But as soon as I saw the intense darkness, and heard the beating rain, I half repented, but not until Jehu had started, and then it was too late. In a few moments, however, it became painfully evident that we had an unpleasant drive before us. It was so utterly dark that until we got out of town it would be impossible to go faster than a walk, without danger. We drove up a blind lane—into a back yard—up against corner posts—over piles of gravel that had been dumped into the streets for repairs, only the evening before—until I fairly lost my temper. "Lovell, we will never get to Brompton at this rate. Let me out. I'll go back and get my own team, with lamps, and then we will know where we are going to." But Lovell resented this as an insinuation against himself and his horse. "No, Doctor, you just wait until we get out of these cursed streets, into the open country, and I'll show you; the old horse has been in a lumbering-camp all his life, and is as steady as a rock." "Well," said I, "let me drive until we get into the open country." No! the very devil—or something else—as I then began to think, had taken possession of Lovell. "Did I think he had been drinking? He had been down to the tavern, before he came for me, to get a bottle of brandy—*the women told him to*—but he had not tasted anything." We were just coming to a slight descent in the narrow roadway, at the entrance to what was called most appropriately the "Lovers' Walk." On the left, going down, was a very steep hill-side; on the other a deep ravine. The branches of the trees meeting overhead formed one of the loveliest covered avenues in all creation. Nothing could exceed it in beauty—that is to say, "on a calm, still night," when one could catch the twinkling of the stars or a glimmer of moonlight through the tree-tops, a loved one at his side reciprocating vows of endur-

ing affection; but on a night like this—as "dark as Erebus and blackest midnight"—the scenery and surroundings were without charm.

As we began to go down the hill, my friend touched up his old horse in most jubilant style, saying as he did so, "I guess we are all right now." I uttered a vigorous protest to this, declaring that if he did not go slowly through this grove I would get out and go home, and he might go—somewhere else—for another doctor; I was not going to have my neck broken for his—bad word—recklessness! I think this remonstrance had its influence, for he commenced a sentence in approval of its wisdom, and ended the sentence at the bottom of the ravine! Just one crash, and away we went into the woods below. I say *below*, but at the moment I was so dazed I could not tell whether we had fallen up or down. Lovell seemed to be some ten or fifteen feet off, shouting out in great tribulation a volley of inquiries: "Doctor! Doctor! are you hurt? Answer! Whoa! Whoa! Stop kicking, you brute! Doctor, are you killed? If you are, for God's sake say so. Whoa! He's dead! Where are you?" Evidently the horse had come down with us, and was "lashing out" to free himself, and Lovell was trying to keep clear of his legs and find me at the same time. When I got up and shook myself I was so fearfully angry that I did not answer, but devoted all my energies to getting up into the road again; any noise I made in climbing was drowned in Lovell's terror and the noise of the kicking horse. At last I stood in the road, minus a hat, one leg rather painful, and the ring of Lovell's old perforated-tin stable lantern over my wrist. We had put it out a few minutes before as being worse than useless, and to stop its racket in the bottom of the wagon I put its ring over my wrist. At the moment of going over I was toying with the ring of my pass-key on my little finger, and as I stood there in the road the pass-key remained on my finger. *A propos* of this, it instantly brought to my recollection an incident relating to a friend of mine. He was standing on the deck of a steam ferry-boat as it was roaring off its steam ready to start. The boiler exploded, with great loss of life. At the moment that my friend was sent flying into the air, he was eating an apple; and when in due time he came down, *the apple was in his pocket!* How and when did it get there? Going up, or coming down?

When I reached home I had my horse harnessed, my lamps lighted, and was ready to start, when a person came to the door. It was Lovell! When he saw me he gave a most unearthly yell. He had left me—as he thought—dead, or unconscious, in the ravine—had come to tell my family—and here I was meeting him at the front door! Why did I not tell him? Why didn't I say I was not dead? However, when he cooled off, I bundled him into the wagon; and when we got to the scene of the disaster I left him one of my gig-lamps, to assist him in looking for his horse and things, while I went on to attend to his wife. About 9 in the morning, as I was driving home, I met the horse, grazing his way leisurely along on the road-side in the direction of his home: a great, big, brown horse, verifying in his appearance his character as having been brought up in a lumbering-camp. His bridle was over his ears, the reins dragging behind, and each trace holding a portion of a broken thill. I got out, tied up the reins and bridle, detached the broken thills, and sent him on his way rejoicing. As soon as I got home I took a tape-line and went back to the broken wagon. Only the hind wheels and body remained on the road-side, the hind axle having been caught by the top of an old post that had in former years formed part of a fence.

My hat, a round-topped hard felt one, was deeply imbedded in the earth at the foot of a large tree. From the wagon-seat to the hat was an unbroken twenty-three feet, and nearly that distance from the road-side to the tree.

In making a sudden descent of that kind, there is nothing like a good "owld Irish head" and a hard-topped hat.

The front wheels had gone down with the horse. A rude stone wall of six or eight feet held the roadway on that side, and on the top of the side-hill opposite was a public cemetery, while a short distance below down the ravine was a brewery. The lower branches of some of the trees had been trimmed with a sharp axe, leaving projecting points three or four feet long, ready to transfix any poor

unfortunate. Indeed, all the surroundings were suggestive of a coroner's inquest and a verdict of "Two men and a horse impaled!"

About 3 P.M. Lovell turned up to inquire about his horse. In the forenoon he had heard of a stray one, and started in pursuit; he had even been some miles above "Great Bumbleton by St. Francis and Massawippi," and was delighted when I told him the animal was at home. He explained to me how he thought the accident had happened. He had oiled the harness the day before, and the tongue of the buckle on the "nigh side" of the driving rein was broken. He had simply tied a loose knot, and when he tried to pull the horse up going down the hill the knot slipped, throwing all the weight on the "off" rein. The horse simply went where he was told to go.

"Great Bumbleton on St. Francis and Massawippi," to which I have alluded, should not be confounded with "Little Peddlington on St. Francis," but it sometimes is—why, has always been a great mystery. "Great Bumbleton" is many feet higher on the River St. Francis, and consequently many feet higher above the sea level, than her less favored sister—higher educationally and in all the refinements and charms that go to make up "society."

Sherbrooke, P. Q.

FRACTURE OF THE EXTERNAL CONDYLE OF THE HUMERUS.

BY F. E. BUNTS, M.D.

Fracture of the external condyle most commonly, indeed almost invariably, occurs below the age of sixteen. Personally, except as the result of crushing wounds, I have never seen it but in children under seven years of age.

It is difficult in young children to ascertain the exact mode of its occurrence, as they are usually unable to give a definite history of the accident. It is probable, however, that the majority of cases occur from a fall upon the elbow, though in some it is certainly caused by a fall upon the hand, the force being transmitted through the olecranon, which is driven upwards and outwards carrying with it the head of the radius and the external condyle.

In the less severe forms of this injury the periosteum is but slightly torn, the amount of displacement being thus limited by its attachments. In these milder forms of injury, the external lateral ligament exercises some influence in maintaining the fragment in its natural place, though, owing to its comparative insignificance in size and attachment, its resistance is scarcely to be taken into consideration in the more severe forms of this injury. When the ulna retains its position, it is probable that this ligament exercises considerable influence in maintaining the fragment in place and preserving the topographical relations of the joint; the line of fracture, beginning at the outer edge of the humerus, runs obliquely downward and inward to the joint, either through the surface articulating with the head of the radius, or into the trochlea, in which latter case the olecranon process of the ulna is likely to be displaced along with the head of the radius, making a complexus of symptoms that may lead to a faulty diagnosis of a simple dislocation of these bones—the more serious trouble, the fracture, being entirely overlooked.

The displacement of the fragments may take place in any direction except inwardly. The natural tendency of the extensor and supinator muscles, as well as of the lateral ligament, is to prevent the upward displacement, and yet it not infrequently occurs. It is somewhat difficult to understand how this upward displacement can often be so marked and persistent, and I can only account for it upon the supposition that the attachment of the extensor muscles is broken off. I have observed this to happen in a case of compound dislocation of the humerus, in which a small fragment of both internal and external condyles with the attached flexor and extensor muscles were stripped from the condyles.

If the fragment be displaced outward, the joint is widened; if upward, the carrying angle of the forearm is lessened; if downward it is increased. When the lower end of the condyle remains fixed, there is, especially in extension, a tendency for the upper end of the fragment to tilt forward, making an easily discernible prominence on the anterior surface of the bend of the elbow, a prominence not always easy to overcome, and which may

persist after repair and restoration of function are complete.

Diagnosis is of so great importance, particularly in rendering a prognosis, that few cases will present themselves in which it will not be advisable to administer an anæsthetic. The close resemblance which it sometimes bears to a posterior dislocation of the ulna and radius, combined with the rapid swelling which often occurs, makes such an examination almost imperative, for without it the surgeon might easily be misled into giving a prognosis based upon the supposition it is only a dislocation; which might prove a costly error—costly to care for when it is found the elbow is nearly stiff and that an exuberant callus has made its appearance at the site of injury. But with an anæsthetic, even in very severe injuries of the elbow-joint, the exact nature of the lesion is ordinarily quite readily made out.

It is important that there should be some uniformity of opinion as to the prognosis to be given in these cases, for I am strongly of the opinion that the physician should not only take care of his patient, but of himself; and if he be led, by the brilliant results sometimes reported in the treatment of these cases, into giving an unqualifiedly favorable prognosis, he may regret that he was not also familiar with the fact that nearly every surgical authority agrees that fractures involving the elbow-joint are peculiarly liable to be followed by severe inflammation, anchylosis, and deformity. Even in the more simple forms of these injuries and when the treatment is most skillfully conducted, there is great risk of an unfavorable result. It is true that one writer* has reported seventy cases of this injury, all of which, under one line of treatment (fixation in a straight position), recovered with a complete restoration of function; and another† reports forty cases, all dressed in plaster bandage in a flexed position, with almost all restored completely in form and function. Yet such results have not been obtained under the treatment of Gross, Agnew, Hamilton, or Stimson.

There is such a vast difference in the methods of treatment which produce good results, that we must conclude it is not upon any one form of splint that we must rely, but rather upon the good judgment of the physician in selecting that which best suits the case.

It has seemed to me that the efficient treatment of fractures of all kinds has been greatly hampered by the repeated attempts that have been made to lay down dogmatic rules as to position, splints, etc., to be used in given cases. There is one prime indication to be met in every fracture, and that is to hold the fragments in position after reducing them to their places. It is not necessary to have a special method of dressing the fracture: If a posterior splint will best hold the fragments in place, by all means use that splint; if an anterior, or external or internal lateral splint answer best, then such alone should be used; no preconceived notion should impel one to use a certain splint when another will better fulfill the indication mentioned.—These rules apply to all fractures, and especially to the one under consideration.

First reduce the fragment, if possible, to its proper position, and then hold it there. It is not wise to dress them all at a right-angle, nor all in the extended position. Neither should a posterior angular splint be preferred, to the exclusion of an anterior one, an internal lateral to an external lateral; rather should that splint be applied which best holds the fragment in position; and the fact that the fragment may be displaced in any position, except inwardly, should make it apparent that no one form of splint is invariably indicated.

There is another part of the treatment I consider of even greater importance than the nature of the splint.—I refer to passive motion. Here we find a great difference of opinion as to the proper method to be pursued. It seems reasonable to presume that some cases, at least, will present such a severe injury, not only to the bone but to the soft parts, that early passive motion may not safely be employed; but from a careful compilation of the results obtained by many who resort to it, and from the excellent results it has afforded me, I am strongly of the opinion that the vast majority make more perfect recovery, especially as to function, than do those in which long-continued fixa-

* Berthonier.

† Powers.

tion is resorted to. My own practice has been to begin passive motion as early as the fourth or fifth day, unless severe injury and inflammation prevent. I have most frequently made use of the anterior angular splint with a short posterior splint for the arm, believing that with this and with a carefully applied roller bandage, and possibly a slight compress, I can accomplish not a little toward maintaining the normal relation of the parts about the elbow-joint. Beginning at from the seventh to the tenth day, I gradually, at each dressing, alter the angle of the splint until a straight position is attained, and then reverse the procedure until the rectangular splint is again used. This is persisted in for two and a half to three weeks, when all splints are removed and daily passive and tentative active motion resorted to. By these means I have thus far invariably succeeded in obtaining excellent if not perfect motion, though I have seen exuberant callus with abnormal prominence of the upper end of the fragment persisting after a year had elapsed in one case, and a lessening of the outward deflection of the forearm due no doubt to a downward displacement of the fragment in another. I am not unmindful of the words of Gross as to anchylosis and deformity, and his opinion is shared by a great many writers; and I feel that we are justified in refusing to give in these cases a prognosis of perfect recovery, either of function or shape.

To briefly recapitulate:

Fractures of the external condyle are confined almost exclusively to children, and are usually the result of direct injury:

Displacement of the fragment may take place in any direction except inward, and is sometimes accompanied by a dislocation of the radius and ulna:

While good motion may generally be anticipated, anchylosis either partial or complete is of frequent occurrence:

An unusual prominence of the upper end of the fragment, widening of the joint, increase or decrease of the carrying angle of the forearm, may result under any treatment:

No dogmatic line of treatment should be insisted upon:

Early passive motion should be resorted to:

The prudent surgeon will at once inform his patient or patient's parents of the nature and probable consequences of the case, and refuse to promise them under any consideration that a perfect result will occur.

Cleveland, Ohio.

LAW VS. THEORY IN THERAPEUTICS.*

BY GEORGE M. AYLSWORTH, M.D.

The great lesson of modern science is: "That nothing happens—that everything that comes is pushed from behind."

Three years ago I read a paper before the Ontario Medical Association in which I put forth a plea for trial of some of the drugs and some of the methods of administration employed by homœopathists. In doing so I was reaching out, perhaps blindly, for something definite to guide me in therapeutics in the shape of law. While emphatically disclaiming originality, I think I have found in the work of others, to whom I would express my gratitude, enough solid ground to serve as a foundation for therapeutic law. Having re-arranged the material for that purpose, and satisfied myself of its truth by experiment, I submit the same for criticism.

Notwithstanding Comte asserted, "Some kind of theory is necessary to the most advantageous study of facts—to serve as a thread upon which to string the pearls of observation," I believe the practical application of this to therapeutics has left us where we are to-day. Few are inclined to deny that in the past, theory in medicine has been a disadvantage, when they remember the procession of theories that has been twenty-five hundred years in "passing the given point" of the medical mind. Twenty-five years ago Tanner of London, and Flint of New York, were the high-priests of the expectant plan of treatment, the basis of which was the view that disease is not an entity but a manifestation of abnormal life, and that specific remedies did not exist. They believed that by placing the economy in the most favorable position for normal life to exert its power, the evil would be corrected as quickly as possible by Nature's unaided forces. We still treat fractures upon this principle.

*Read before the Ontario Medical Association, session of 1894.

Within the last ten or fifteen years disease has again become an entity, and each affection has its own microbe or bacterium which is deemed its focus and source—we have surrendered ourselves almost without reserve to the microbian craze; and unfortunately the attendant researches in dead-house, rabbit-pen and laboratory have resulted, so far as remedial measures go, in little more than the suggestion to set phagocytes at work to devour the bacilli which are eating up the patient. As to the wide diffusion of this idea, I would put in evidence a leading paper recently read before the American Medical Association, from which I quote:

Hence it was a gratifying announcement that we had within ourselves our own defenders and defenses. "In the blood is the life thereof" began to have a greater significance, through the belief that living cells devoured these countless swarms of intruders and thus prevented their disastrous inroads. It was enough then for us, by tonic and alterative and stimulant and roborant, to preserve the appetites of these domestic phagocytes and see that they were always in sufficient numbers to patrol the avenues of the circulation.

This involves the idea that each species of microbe may have its own phagocyte, and that when these are discovered treatment can be instituted which will be specific in fact; that if a patient has gonorrhœa the introduction of the germs of the proper phagocyte will be all that will be necessary to cure—they will meet the gonococci and swallow them up; in a case of consumption the proper phagocytes will go in and take the rod bacilli *vi et armis.*

I have lived a generation too soon, and I envy my successors the enjoyment that will be theirs when this state of things obtains. Imagine the culture of the phacocytes, the holding the armies ready for battle, the letting them loose upon the enemy, and witnessing the combat! Foot-ball, horse-racing, whist or chess will not compare with it.

But seriously, whether I am justified or not in applying the word *craze* to the latest theory of the cause of disease, there can be no question that the acceptance of a wrong theory will stop therapeutic progress; and so much evidence can be adduced that the microbian faith of the last decade is of that genus that I still keep *sub judice* the query: Are micro-organisms the direct cause of disease? That there is a possibility of its being answered in the negative can hardly be denied when the editor of one of the oldest and most orthodox medical journals on the continent officially says:

The philosophizing bacteriologist must realize that in its present development his science is in an unsatisfactory condition.

He supports this view by stating on the authority of specialists that it is impossible to differentiate the pathogenic and non-pathogenic diphtheria-bacilli, or the innocent from the virulent pyogenic cocci, both varieties passing under the name of *Streptococcus pyogenes*, and that it is still in doubt whether or not the bacillus of typhoid fever is anything more than a modified variety of the ever present *Bacillus coli communis.* He also extracts from a treatise of three hundred pages upon the bacteriologic examination of drinking-water, by a learned European professor, these two gems:

The use of water which contains a specific pathogenic germ should be absolutely forbidden.

The detection of specific pathogenic germs in water is surrounded by so many difficulties that its accomplishment is not likely to occur in the future.

Again, looking where bacteriology has been thought to have won its greatest triumphs—in tuberculosis—we find that no less an authority than Solomon Solis-Cohen has, very recently, pointed out that in guinea-pigs, rabbits, and man, histological lesions which cannot be distinguished from those produced by living bacilli can be and are produced by dead bacilli, powdered glass, bits of oyster shell, and other non-living irritants. Now-a-days these lesions are called *pseudo*-tubercles, because they do not contain living bacilli—which he regards as a remarkable illustration of the fallacy called "*begging the question*"—"arguing in a circle"—or in logical terminology *petitio principii;* and also says:

In pseudo-tuberculosis we have the histologic lesion but not the toxæmic symptoms of bacillary tuberculosis. But certain forms called "zoöglear tuberculosis" present both lesions and toxæmia, although a different microbe from Koch's bacillus is found.

Do not such statements from such men indicate at least the possibility that after exhaustive inquiry we may be compelled to answer in the negative the question, "Are micro-organisms the direct cause of disease?" Should this occur, it will necessitate the admission that through the whole history of medicine, extending over twenty-five hundred years, the physician, ever refusing to approach great Nature in a humble and receptive—let alone a scientific—spirit, has always had some self-evolved theory which he worshipped and by which he explained all her workings, and, as happens to all wisdom wise in its own conceit, has gone away fooled and misled by the phantasms of his own preoccupied mind; and we will still be compelled to exclaim: "*Theory, Theory—all is theory.*" "*Contraria contraries*" is now thought to be obsolete, and "*Similia similibus curantur*" is regarded as a coverlet for fraud, and our only guide is nosology, which, without regard to the vital stamina of our patients, has dubbed a certain set of symptoms Pneumonia, another set Typhoid Fever, a third Diphtheria; and authorities tell us that this, that and the other drug has been "used with advantage," that another "may be tried," a third "found of benefit," etc., until at the present moment one may administer any given drug in any given disease and support such action by what is called "good authority!"

To show that this view is not confined to myself, I would quote from the published report of a meeting of a prominent medical society in a large medical centre on this continent:

I would like to inquire how many drugs in the Pharmacopœia really cure?—certainly very few. As educated physicians we hesitate to say we have cured our patients; all we expect to do is to guide our cases to recovery. I have no reference in this connection to surgical interference.

Professor Nothnagel of Vienna told a representative body of physicians:

The therapeutic potentiality of the physician's art is its most ancient possession, grossly over-applied through the centuries, then abruptly abandoned in part, and *now wavering in uncertainty.*

The reports do not state that either of these gentlemen was contradicted. Again, a recent journal says:

The very reasonable hypothesis that the various glands supply an internal secretion to the blood necessary to its maintenance as a vitalizing medium, has been twisted into the baseless fabric of a vision of every organ secreting or manufacturing specific nutritional substances. In harmony with this conception, a system of therapeutics is suggested which smacks of sixteenth-century enlightenment, in which extracts of various organs are administered for diseases of homologous parts. On the other hand, we find a distinguished German observer carrying his nihilism to the extreme of contending that all the results of electro-therapeutics are those of suggestion. Between so much faith and so little, where do we stand? Shall we next hear that opium relieves pain and chloroform produces anæsthesia by suggestion? or shall we learn that zygomaticin is extremely beneficial in melancholia?

That this therapeutic befuddlement really exists, seems incredible to outsiders who as residents on earth in this closing decade of the nineteenth century believe law reigns supreme without the least exception to its omnipotent fiat, in ethics as in chemistry, in political economy as in mathematics, in art as in gravitation.

Early in this generation, orthodox religion and orthodox medicine were parallels, for the one was committed to the doctrine of Special Providence, the other to special theories; but the former has merged its Special Providence into a general providence working through fixed and universal law, thus trying to accommodate itself to its environment; while the latter, instead of merging theories into the general law of cause and effect, has defied the latter—discarded its old theories and adopted a new one, the microbian, which, unsatisfactory in furnishing cures, leaves the profession, like a dismantled ship, drifting towards—testicular elixir of life, tuberculin, cerebrin, and precious pink pills.

But is it necessary that the oldest, best, and most godlike of the professions should continue to proclaim the non-existence of law in its oldest possession—the therapeutic potentiality of drugs—while the supremacy of law is almost universally acknowledged? I say No! And I believe that the ascertainment of a law in the therapeutic application

of drugs will be by Spencer's unrivaled universal formula for the discovery of any natural law in any department of science: "Though we can never learn the ultimate nature of things, we are learning more and more of their order of manifestation, and this order of manifestation we call law."

As therapeutists we have therefore but a secondary interest in the ultimate nature of diseases, of drugs, or of cures; but we are greatly interested in the order of manifestation, for therein lies the *law of cure*. In other words, we must place ourselves in opposition to all that men now-a-days consider proven, or accept in therapeutics the universal law that "like causes under like conditions will produce like effects;" and when we are inclined to ascribe our failures in applying this law to what we euphoniously call the idiosyncrasy of the patient, we may safely conclude that the law is not fallible, but our failure is due to an error of observation — to want of ability in applying the law; and it seems to me more manly, as well as scientific, to boldly own ourselves at fault than to hide behind that delicious mouthful—Idiosyncrasy.

Osler admits the correctness of this position when he says that if you think you have the symptoms of malaria and treat them with quinine to cinchonism without benefit, the quinine is not at fault—it is you that are mistaken. This is but another way of saying you are trying to get like effects from like causes under *unlike* conditions—which you have no right to expect!

Among us, specifics are not very numerous; I have, however, by broadened reading and a rigid application of the law of cause and effect, extended my list very materially, besides having a number under trial which I have not yet adjudged worthy of a place. But at this point I would recall what I deem a truism, viz., that disease and a normal manifestation of life are incompatible; and to impress this idea also, that what I call a specific does not pretend to expel some entity from the body directly, but it does change to the normal a given abnormal method of life which may be found in many nosological diseases, and that it will induce this change no matter in what disease the given abnormality may be found. That the search for such specifics and a rational therapeusis is not the *ignis fatuus* commonly supposed, I think is easily demonstrable. The primitive rationalism of early medicine is very properly still employed.

The removal of morbid accumulations from the alimentary canal by an emetic or cathartic, the use of a narcotic or hypnotic to relieve pain or produce sleep, are certainly rational measures, and these facts and analogy should have taught us the specific action of drugs; yet notwithstanding physiology has emphasized the selective powers of cells, we have failed in the past to learn the lesson.

The secretion of milk, semen, saliva, and gastric juice; the excretion of urine, sweat, and fæces—alike cry aloud in support of this fact; and beyond these we learn that the cells of every structure are endowed with this marvellous power. The red blood-corpuscles floating in a plasma with the salts of sodium in excess, select the salts of potassium; the cells of osseous tissue select the salts of lime; and so on throughout the list. These statements need no support beyond our text-books, and that this selective power is extended to drugs cannot be denied.

Whether it resides in the cells of the nervous centres controlling the organs, or is a power inherent in the cells composing the various structures, we may not be certain; but that such a power exists *we know*, or else our classification of drugs into diaphoretics, diuretics, sialagogues, etc., is absurd.

Reasoning from analogy, I assert that every organ and tissue in the human body has drug affinities, and that it is our duty as physicians to find and make use of them. Knowing as yet but few, their universality cannot be fully proved, but he who attemps to disprove it will have a very extensive contract on hand, indeed.

Be kind enough to note here that this selective power persists only while life remains; and I am much pleased to observe that medical science is about the first to admit that it is unscientific to ignore life as an entity distinct from matter. Ewald, Haliburton and J. S. Haldean uphold the statement of Lionel Beale, that:

The more we know about the non-living, the wider and deeper becomes the gulf by which it is and has been separated from the living.

Bourdon Sanderson also adds:

If on the one hand protoplasm is the basis of life, on the other life is the basis of protoplasm.

Notwithstanding synthetic chemistry may have produced urea, and possibly a few more poor end-products of vital catabolism, William Goodell was right when he declared:

The marvellous kinship of mind and matter is a tangled skein unraveled as yet by dead-house or laboratory.

Synthesis has failed completely to make protoplasm, let alone producing a ganglionic nervous centre, or a whole nervous system, or a self-moving living organism of even the lowest order; and when we remember that there is still a wonderful chemist who with the greatest ease fills the earth with an infinite number of all the millions of varieties of life manifestation, and that the old name of this chemist was God, we would do well to modestly admit that as far as our knowledge now extends, He is the source of all life. I therefore believe that mankind has but one source of life, and that it is the same for all men and all parts of each man. The normal manifestation of this life we call health, the abnormal manifestation we term disease. Disease, then, is a method of life in a living body; it is not a bacillus or bacterium which we can chase out of the economy with a definite phagocyte as we would chase cattle out of a field of wheat with a dog—a something dubbed a ptomaine to be expelled from a living body by Epsom salts, calomel and jalap, creosote or pilocarpine—but actually a method of life; and changing this method of life from the abnormal to the normal constitutes the cure of disease. Until this fact is recognized, notwithstanding our increased diagnostic powers, in my opinion therapeutics will not advance as it should.

The direct action aloes and collinsonia have upon the lower bowel, cantharides and apis mellifica upon the urinary tract, digitalis and the cacti upon cardiac affections, ipecacuanha and bryonia upon the stomach, etc., should convince the most skeptical of the affinities of certain drugs for the cells composing certain organs, or *vice versa*. It is in these affinities that we must look for specifics, and it devolves upon us to differentiate the abnormal method of life in which each drug is a specific remedy, knowing well that if the law of cause and effect be true, a certain drug which will change a certain abnormal method of life to the normal to-day will do so to-morrow, next year, and so long as that condition appears and medicine is practiced; if it will perform this function while patients are suffering from pneumonia, it will do so when they suffer from typhoid fever and diphtheria. If it cures Tom it will cure the other two members of the trinity—Dick and Harry—and will be equally applicable in like conditions to their fathers, their mothers, "their sisters, their cousins, and their aunts." This leaves no room for idiosyncrasy, except in ourselves when we expect effects from wrong causes or imperfect conditions owing to ignorance, carelessness, or faulty observation.

The central idea of this paper is the infallibility of the old chemist, Nature, and the resulting unchangeability of law, as against the utter fallibility of man and the resulting incorrect theories. It is, in fact, a protest against the absolute materialism that has covered science like the deluge; a protest against the zeal which in the past has been investigating pathological processes, excessively stimulated thereto by the *vain* hope that the knowledge thus acquired would point directly to the drug which would prove successful in cases like those investigated. I would say here that I yield to no one in my admiration for the tireless energy of our pathologists, whose success is demonstrated by the fact that our diagnosis has completely outgrown our treatment; and yet, while I freely admit that pathological anatomy has afforded us clearer ideas of morbid processes, given us a more appropriate and better classification of disease, and enabled surgeons to afford relief where it would have been impossible without its aid, I believe too much has been expected from pathology. Its followers have forgotten, if they ever realized, that while pathology does aid in diagnosis, it cannot *per se* assist us directly to the therapeutic application of drugs, because the successful correction of pathological processes by these means does not depend upon the favorable influence produced directly upon the pathological processes themselves. That condition

which constitutes a pathological process in relation to the economy is a normal condition in relation to the process itself, and the only way to produce a change in the process favorable to the economy by the administration of drugs is, to conserve and stimulate the vital energy remaining in the economy when the effort to cure is made. This is merely enunciating as a general principle what Cohen specializes when speaking of the treatment of tuberculosis. . For after pointing out that "all of us are practically attacked by tubercle bacilli all the time, and those of us who are in a normal condition possess the requisite amount of vital energy to enable the bronchial and other glands to closely imprison and finally destroy the invaders, and no harm is done," he declares "the aim of treatment must be to make other people as strong as those who resist naturally," advising us as physicians to try to do with our patients as did Oliver Wendell Holmes's deacon when building the "one-hoss shay:"

"It's mighty plain,
The weakest place must stan' the strain;
An' the way to fix it, ez I maintain,
Is only jest to make that place as strong as the rest."

If these views are sound, it can hardly be questioned that the sooner we attempt to reestablish a natural manifestation of life after its departure from the normal, the easier it will be to obtain the desired result, and the more completely will we prevent the gross result of abnormal deviation—pathological change; for if the histological elements of a part have once been altered, though apparent health may be attained, remedies seldom or never succeed in restoring it completely. Hence the corollary: Even when a true specific is properly used, though the tendency is to cure, its effect in that direction will vary inversely as the normal vital energy is impaired and the extent of the histological changes.

In conclusion, if by this paper I have succeeded in impressing some of the medical minds of Ontario so that they will realize more fully in the future than they have in the past that there is but one life, and one source of that life, and that in dealing with disease we are simply dealing with an abnormal manifestation of that life, my object—the advancement of therapeutics by the administration of drugs—will be well served. For if—as Mr. Herbert Spencer asserts and I believe—"we are in the presence of an infinite and eternal energy from which all things proceed," I cannot conceive of a condition of perverted life without a special remedy in nature for it. And should many in the profession stop shouldering their mistakes upon Nature by the use of the word "idiosyncrasy," more freely own their want of knowledge, and learn to appreciate the immutability of the law of cause and effect, and thus be stimulated to search for these specific remedies, in my opinion the echo of the tramp, tramp, tramp of therapeutic progress in Ontario will soon resound throughout the world.

Collingwood, Ontario.

A NEW CURE FOR ENLARGED PROSTATE.

BY G. A. HARMAN, M.D.

For several years the enlarged prostate has been a subject of much consideration, and I have hoped that some remedy or operation would be discovered for the relief or cure of these heretofore hopeless cases.

In THE MEDICAL AGE a few years ago I suggested an operation for the removal of the pathological middle lobe—entering the perineum as in lithotomy, and, when the prostate is reached, dividing the incision like the letter Y, including the lobe in the fork, cutting to but not into the bladder; then peeling or scraping out the lobe, thus letting down the base of the bladder so that it no longer acts as a valve to the urethral opening.

This attracted some attention, but was soon superseded by the supra-pubic operation, which has always seemed to me less desirable as the bladder is opened above to admit the scissors with which the lobe and part of the bladder covering it are sheared off, making two large openings through the walls of that viscus, when by the lower operation no breach in the cystic walls is made.

Lately castration has been advocated and performed, upon the belief in the interdependence of the prostate and testes, and that the removal of the latter would cause

atrophy of the former; and such seems to be in a measure a result, judging from the favorable cases reported.

In the mind of the average man the removal of the testicles is a formidable operation. Even if there is little danger, they are a part of the anatomy he does not care to part with, though they may have passed the period of usefulness. He reverts with pleasure to their past value, and cherishes them with fond recollections; besides, socially he does not want to be known as a eunuch; hence he acquiesces in their removal only as a *dernier ressort*, when probably it is too late. Most men are not philosophers!

And such I found to be the sentiments of Mr. N. B——, to whom I was called nearly two months ago. He had suffered with enlarged prostate for several years, running through the usual course, till now something had to be done. The latest, and apparently the best, means of relief was offered, but upon the grounds named was declined. The catheter was used with difficulty, and other remedies advised. Thinking over his case I concluded that if his spermatic cords (which are composed of the arteries, veins, lymphatics, nerves and excretory ducts of the testicles) were severed, atrophy of the testicles and consequent atrophy of the prostate gland would follow.

I easily persuaded him to submit to this simple operation, which I performed by separating the cord from the other contents of the scrotum, which was readily done because of its cord-like feel and the thin and relaxed condition of the sac. I accordingly worked it over to one side and pressed the scrotum closely around it; then a hawkbill bistoury was thrust through behind and cut out. The severed ends and cut scrotum were held in the fingers a minute or two to allow the blood-vessels to contract, and when let go there was little bleeding. Cleanliness and antiseptic precautions were observed. The wounds healed promptly.

Atrophy of the testicles followed, as was expected. The prostate is also diminished, as is easily verified by the finger in the rectum. The patient, moreover, is very much improved, and passes urine less frequently and with less discomfort, while the catheter does not have to be resorted to nearly so often. Of course other means are being used to promote recovery.

While my patient is not well, he is growing better instead of worse, and I hope and expect permanent results in the near future.

What name shall be given this operation?

Lancaster, Ohio.

THE CONTAGIOUSNESS OF DIPHTHERIA.*

BY JOHN R. HAMILTON, M.D.

Two years ago, when reading the reports of the Ontario Medical Association, I was very much interested in a paper by Doctor Wilson citing cases wherein diphtheria certainly seemed to be carried to a third party. This evoked much discussion at the time; and the majority of the members no doubt still cling to the belief that the disease is *not* communicated in any such way, and in this belief we have nearly all rested, although at all times the epidemic nature of the disease is admitted, and the theory of direct contagion is, all know to their sorrow, only too well founded—the untimely death of many young physicians, estimable nurses, and loving mothers, caused by coming into too close contact with the poison-laden breath of the dying child, testify too clearly to this fact. But while admitting the theory of direct contagion, I think the majority of physicians, when asked by friends if the disease is transmitted in the manner that bacteria of other zymotic diseases are transmitted, feel justified in giving a negative reply; and why should they not, when such an opinion accords with the views of men of large experience? Squire, of London, says:

I know of no instance of the disease being carried from one house to another by the passage to and fro of those who were themselves unaffected.

Bretonneau's theory of direct contagion, and Trousseau's inoculation experiment, give nothing to medical literature to warrant belief in the disease being propagated by a third party.

Now we have had many men of large experience contribute their opinions on diph-

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theria—one of the longest known and most dreaded of all diseases,—its causes, many and varied types, paralyses and other sequelæ, multitudinous therapeutics, many of them very widely different, etc.—one author in England, for example, in giving the differential points between scarlet fever and diphtheria, says the latter is found more frequently in rarefied atmospheres, on sandy hills, in Alpine regions in fact; whereas we who have practiced in the low-lying districts of Ontario know the converse to be the fact, and that the drainage of our loamy soils has had effect in extinguishing the disease.

A short time previous to reading Doctor Wilson's paper, or in February 1892, I was called to attend a family in which a little boy of seven years was prostrated with this disease; afterwards one of the young women of the family was taken with it. The little boy had the asthenic form followed by paralysis, to which he afterwards succumbed; the young woman recovered. But during the time of the illness of these two, a relative—mother of a large family—visited them, remained only a day, and then returned to her home nine miles distant. Four or five days afterwards I was called to attend two of her children, one of whom had already hæmorrhage from the throat and nose, and in a few days her whole family, including the servant girl, contracted the disease. Now there was no diphtheria in the neighborhood of this family either before or after this event, neither had the mother any symptoms of the disease.

This case was so striking that I have been watching for positive evidence as to this method of propagation, but so far only find in this country one report corroborating Doctor Wilson's testimony, viz., that of the Medical Health Officer for Toronto for 1892. He says, in an essay read before the Provincial Board of Health:

As an example I may state that an infant living in one of the suburbs of this city was sent away from home when the disease existed, for fear of contagion. The baby was successively sent to three families living in remote parts of the city. The baby took no sickness, but diphtheria occurred in all three houses, two of the infected children dying.

Now any addition to the knowledge we already possess of the ætiology of a disease which during the past few decades has done more than any other incidental to childhood to prevent the increase of population, must be welcomed by all workers in the cause of sanitary science, as we have evidently yet much to learn. As to the causes which may lead to an outbreak of this or any other zymotic disease, after going through a labyrinth of opinions we are glad to reach the vantage ground of a specific cause which we are now supposed to have in the bacillus discovered by Klebs and afterwards largely experimented with by Loeffler. This is now, perhaps, the generally accepted cause of the disease, as the cultures of this germ produced the fever and depression when injected into the circulation of the rabbit, and also the paralysis which we know to be a common sequel of this disease, due no doubt to the rapid degeneration of the nerve cell, or, as Kaufmann asserts, to a toxic neuritis. This bacillus, we are given to understand, produces in the tender epithelial mucous membrane of the fauces a ferment which, when absorbed, forms albuminoids by digesting the proteids, and acts as other pathogenic microbes in producing, or rather manufacturing, a chemical poison. Now one question we, as practical men, are deeply concerned in seeing answered, is: Does the bacillus of Klebs act at all in such a manner as the bacteria of other zymotic diseases, as scarlet fever, smallpox, or measles? Will the physician use the same caution in attending diphtheria that he would if he encountered a case of puerperal septicæmia; and does he do his whole duty if he neglects to warn visitors of the danger of contagion by conveying the disease to others unwittingly?

Port Dover, Ontario.

LEGALITY OF VACCINATION.

The Supreme Courts of the States of New York and Pennsylvania have definitely decided that children who have not been vaccinated can be prevented from attending public schools.

This is as it should be, and the sooner other States take cognizance of these decisions and enforce compulsory vaccination laws, the quicker will there be a great advance toward permanently stamping out smallpox.

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Editorial.

WHAT IS MALARIA?

The ætiology of malaria is one of the moot questions of the day, despite the surfeit of literature that has been exploited to prove the hæmatozoön of Laveran, bacillus of Klebs, or some similar organism is the prime factor. It is a notable fact that in spite of the number of maladies which are accredited to malaria —a term which is made to cover a multitude of sins,—these are far surpassed in number by the theories that have been originated to account for its existence. From a common cold to cholera, from pallor to paraplegia, from indigestion to impotence, all kinds of diseases have been attributed to this source, yet no one has ever been able to intelligently define that source; thus it has been theorized to be a vapor, a sulphur compound, a carbonic oxide, an electrical or magnetic manifestation, the spore of one or more of the *Algæ*, and, finally, a bacillus.

The members of the bacteriological coterie are not troubled with doubts; they have swallowed the bacillus without even the customary "grain of salt," and for obvious reasons it has not apparently in the least disagreed with their mental digestion; nevertheless, they forget this bacillus has not been found everywhere where paroxysmal fevers abound. Moreover, they declare it requires moist, damp earth of a certain temperature—and yet intermittent and remittent fevers prevail in localities where these conditions do not exist. As Sir William Moore pertinently remarked before the Epidemiological Society: "It is not likely that the surface of the earth would produce the same kind of organism everywhere, yet paroxysmal fevers prevail on dry sand, on bare rocks, on cultivated plains, and in semi-deserts." Moreover, it is asking too much to believe in the rapid introduction and multiplication of bacilli—sufficient to develop disease in thirty or sixty minutes, as certain credible (?) observers have asserted—before a person is seized with a fever. Equally incredible is the theory that bacilli may remain quiet for months, or even years, and then suddenly manifest themselves with sufficient virulence to cause a paroxysmal attack; and it is well known that secondary agues *do* occur months, and even years, after the primary development of the malady.

Because a bacillus may be found in the blood in certain localities, such is very far from giving definite evidence that it is the cause of a zymotic malady that prevails in many other regions! It will be remembered the *filaria sanguinis hominis* has been presumed to cause elephantiasis, still there are thousands of Celestials who play the part of host to this parasite and yet do not suffer from any recognizable malady; and such is equally true of the spirillum of Carter, which he regarded as distinctive of relapsing fever.

The majority of Anglo-Indians and intelligent Orientals, as the result of careful investigation, believe that malaria arises solely from sudden changes of temperature, intensified perhaps by variations in humidity—that it is especially a development of hot days succeeded by cold nights. In his annual report a high Indian official, no less a personage than Surgeon-Major Timothy Richards Lewis, declares "the main cause of malarious fever, and one without which it cannot exist, is the great diurnal range of temperature from excessive heat during the day to chilling cold at night." This certainly is well borne out by the manifestations of so-called malarious fevers in the regions of the Great Lakes—the periods of the year which are observed to have high temperature during the day, followed by nights that demand the sleeper shall envelop himself in blankets, are marked by decided accessions of paroxysmal fever.

Again, the Nepal Terai, at the base of the Himalayas, has been supposed to be the most deadly malarious spot on the face of the globe; yet Doctor Duka, who knows the country well, says here the thermometer in November frequently stands at 120° in the sun, and at night falls to 30°, often with cold winds, but "those who have good, well built

houses, duly protected, especially at night, against these changes of temperature, keep their health as well as on almost any part of the plains of India."

Another fact worthy of note is that no native of Hither or Farther India, or of the East Indian Archipelago—the home, so to speak, of the most pernicious forms of malarial fever—believes in the so-called malarial theory.

Again, when fevers of this class prevail among troops and in crowded centres of population, there may be many causes therefor aside from a resort to the term "malaria" for explanation — intemperance in the use of liquor without other subsequent exposure of any kind may often be set down as the source of disease; and in this connection a recent writer in the *Provincial Medical Journal* recalls the advice of Bontius to the effect that "many diseases arise from colds;" and when Derveus expressed his surprise and could not "conceive how cold diseases should predom inate in hot countries," the former replied: "Heat acts injuriously in various ways; there is an optimism of heat which is most favorable to the well-being of animals and vegetables, but if the heat exceeds the optimism the reverse is the case."

Prolonged heat induces certain changes in the blood, and the vital powers of such a victim are often so impaired that he becomes excessively prone to chilling; this is further enhanced by dermal debility and thermic anæmia. How common it is in the tropics —in those regions especially denominated malarious—for a person to be exposed to a temperature of 100° and upward by day, and yet subjected to one closely approaching the freezing-point at night! Such changes repeated in the unprotected system are apt to manifest themselves as paroxysms of shivering cold and burning heat, as "fever and ague" in fact.

Further, exposure to *damp* cold is much more injurious than exposure to *dry* cold, owing to the greater power of moisture to absorb heat; and it is not impossible that thereby changes are set up in the economy involving alterations in protoplasm that constitute veritable poisons. In temperate climates ague rarely occurs except in humid localities, and here it is most manifest in spring or autumn when the changes of temperature present the greatest extremes; consequently the prominent feature which distinguishes malarious from healthy localities is *humidity*, not malaria.

The position may therefore be taken that so-called malarious anæmia is the direct result of heat; that so-called malarious fevers are induced by sudden abstractions of heat, or by chill under the influence of cold, more especially of damp cold; that these effects are most marked in tropical climates because of the antecedent exposure to great solar heat which results in anæmia and cutaneous debility—in other words, because of disregard of suitable precautions; that the individual malady will be of a febrile character in the absence of predisposing diseased condition of any organ; that the febrile paroxysm will be repeated or not, according as temperament, heredity, habit, mental condition, anæmia, previous attacks and recurring chill, singly or collectively, favor repetition.

"Like the old lover's tale," says Sir William Moore, "the malarial myth never seems to weary of telling, but some of the authors tell their tale with misgivings like a bashful lover." There are scores of individuals who have questioned the bacillary origin of malaria, yet they know they are out of fashion, far from the swim, and are content to let time show the justice or injustice of their conclusions; or they dread the heresy-cry that at once arises in all directions from the hordes of superficial observers who at present dominate or seek to dominate medical literature, and who offer positive assertions regarding things they have never had the patience or experience to master. The day of calm, dispassionate study and close and critical observation, appears to have gone by. A schism is threatened, and valuable advance is in abeyance until the return of the tidal wave, so to speak, shall bury incompetence and work a revolution not only in medical literature, but insure in place of callow professors *bona fide* teachers, selected not for their monetary and social standing, but for manifest ability. Surgery, which after all is chiefly dependent upon mechanical expertness and development, has made great strides of late years, but practical medicine aside from this appears to have retrograded. Amid

all the maze arising from the "*plasmodium malariæ*," bacillus of Laveran, and their cultivation, including test-tube pathology, the management of so-called malarious diseases to-day is inferior to that of a quarter of a century ago. Theories have usurped the place of facts, experiments replace therapeutics, and too often the post-mortem table supersedes the convalescent couch.

TRAMPS.

On tracing the history of the recent small-pox epidemic, it is discovered that tramps played a most important part in its diffusion. This very naturally gives rise to the query: "What shall be done with this class of humanity?" Joaquin Miller emphatically states the tramp is a rarity in California owing to stringent enforcement of legal enactments. If this is true, why cannot similar laws be equally enforced in other States where these peripatetic vagabonds have become a perpetual nuisance, and moreover are shown to be potent factors in the dissemination of dangerous diseases?

The laboring-man out of a place must seek for work and go from town to town, but he forms a very inconsiderable proportion of the mixed hordes who are constantly perambulating the highways. The great majority are vagrants to whom work is distasteful, who of their own free will lead a wandering life, existing by their wits, begging, stealing, lying, etc. They are a constant tax upon the respectable and poorer members of the community, though the tax is not enforced by statute books; and, as is well known, if this tax is not freely given, the result is frequently loss to life and property. A large majority of the crimes are directly traceable to this wandering class, whose sole aim in life is the securing of desired supplies of tobacco and alcohol. The negro problem of the South pales by comparison with the tramp problem of the North; and in this connection it might be well to quote the words of Mr. Ribton Turner, who, before one of the benevolent societies of Great Britain, made the statement:

Supporters of missionaries to the heathen may learn it is unnecessary to send to Africa to meet with objects for their benevolent zeal; they exist in rank luxuriance at their own doors. No foreign heathen can compare with them in the utter disregard of religion, in obscenity of language, in utter brutality, and in filthiness of life and action. They are daily discharged from the workhouses and from the foul dens in which they lodge, utterly friendless, utterly uncared for, and left to pursue the broad path to evil without being offered the slightest encouragement to a contrary course. Surely here is a fine field for missionary efforts. To reclaim such savagery would be a work of mercy to them, and of kindness to society.

Our own opinion is, however, that the work of reclamation must begin with strenuous legal enactment whereby these individuals will be gathered in and made familiar with those great civilizers, soap and water and hard labor.

CHOLERA AND COMMA-BACILLI.

In the scientific memoirs by medical officers of India appears a paper on "The Results of Continued Study of Various Forms of the Comma-Bacilli occurring in Calcutta," by Brigade-Surgeon Lieutenant-Colonel D. D. Cunningham, F.R.S., C.I.E.—It will be remembered that Doctor Cunningham is one of those cited as giving evidence in favor of the comma-bacilli; a citation which is far from correct, since an imperfect report of his was accepted as positive evidence when such was only intended to be preliminary. In this paper Doctor Cunningham emphatically declares that cholera in Calcutta is not invariably characterized by the presence of any cultivable comma-bacilli in the intestinal contents, and that even in those cases where such organisms are present, they by no means invariably give the characteristics of those described by Koch and ordinarily accepted as true cholera-bacilli, but differ greatly in different instances both as regards their morphological and physiological properties.

Doctor Cunningham is decidedly disposed to adopt, with slight modification, Von Pettenkofer's theory as to the causation of cholera. His paper is logically and closely reasoned, and sets forth a number of facts in regard to this disease which unquestionably must be met and accounted for before the bacillary theory can receive honest acceptance.

EDITORIAL NOTES.

Cocaine and Temperature.—

Experiments made by Messrs. Langlois and Richet evidence that Cocaine acts more powerfully on animals in proportion to their higher temperature. It is therefore proposed to utilize refrigeration as a means of diminishing the toxic effect not only of this drug, but of such poisons as induce convulsions.

In this connection it may be well to call attention to the fact that Doctor Fenwick proposed a new use for Cocaine. In a case in which the patient suffered from constant pain in the face, limbs, and urethra, a Cocaine solution was applied to the latter before employing an endoscope. This caused the pain in the face to disappear in about sixty seconds, and in two minutes more that in the limbs and urethra had entirely subsided. As the result of this and other experiments, Doctor Fenwick concludes that Cocaine possesses considerable reflex inhibitory power, but that it readily abolishes the consciousness of weak stimuli; that where pain is only reflex or sympathetic in character it might be satisfactorily employed, but when due to actual organic disease would not give relief. Thus he believes it possible to determine the character of a local pain by means of Cocaine—*i. e.*, whether merely reflex and produced by mischief at a distance from the part where the pain is felt, or due to organic lesions at the painful spot.

Sea-Sand Baths for Rachitis and Rheumatism.—

Doctor V. G. Surovtzeff, of Ekaterinodar, Russia, writes that the peasantry and common people generally who inhabit the coasts of the White Sea, treat rachitis by means of hot sea-sand baths, which are arranged in two ways: Either the sand is previously dried and duly warmed in a Russian stove (an apparatus somewhat resembling a baker's oven), after which the child is entirely covered with it; or it is mixed thickly in an ordinary hot-water bath.

The same treatment is likewise resorted to in adults, in cases of chronic rheumatism. In summer the patient goes to the sea-coast, where he buries himself in sand pleasantly heated by the sun's rays, then rubs his body with it, and in conclusion takes a bath in salt water to reduce the last traces thereof. Repeated daily for from ten to fourteen days, the effect is said to be "something almost magical."

Actinomycosis.—

In the *Deutsche Medicinsche Wochenschrift*, Doctor Ostertag revives the treatment by iodine, first recommended by Thomassen. His experience justifies, he believes, the assertion that iodine is an *actual specific* in this disease. In the treatment of cutaneous and subcutaneous actinomycosis, a deep crucial incision is made and the hardened tissues painted once a day with tincture of iodine. Coincidently the system should be saturated with sodium iodide given in aqueous solution once or twice daily. Recovery usually supervenes in from two to four weeks, the result being analogous to that seen in gummatous tumors under like treatment. Bass, Fuertneyer, De Jonge and others uphold Doctor Ostertag.

A Valuable Suggestion.—

A correspondent of the *British Medical Journal* queries as follows:

Could not some of our young pathologists make a series of experiments with gray cerebral matter, and inject the same subcutaneously, so that idiots and fools might be things of the past?

The truth is, too many experiments have already been made in this direction, and the remedy appears to work the other way: instead of decreasing the number of idiots and fools, the supply has been greatly augmented. What is needed is a common-sense remedy for cerebral softening, to be especially distributed among so-called medical teachers.

Acute Rheumatism and Endocarditis.—

Doctor Alexander Harkin, of Belfast, Ireland, well known in connection with researches upon cholera, states his belief that after a chill, when acute rheumatism develops, the initial mischief is endocardiac; that also, frequently, when no cardiac affection can be detected, a blister applied in the region of the heart will cut short the attack of acute rheumatism.

This is a somewhat startling announce-

ment, and, coming from the source it does, is certainly worthy of attention. Should any medical gentleman avail himself of this method, we would be very glad to publish the results in the columns of THE MEDICAL AGE.

What is a Breach of Professional Confidence?—

Recently a French court condemned a physician, superintendent of a lunatic asylum, to pay a fine of five hundred francs, and likewise damages of two thousand francs more, "for revealing a professional secret." He had published a pamphlet in which the identity of the patient was revealed through the use of initials and statement of the business occupation of her husband.

How would an American court look upon this use of initials in the citation of cases by medical men? Finally, is it necessary to use initials at all?

Boldoin.—

M. Juranville again calls attention to the value of this glucoside as a hypnotic. In his opinion it excels chloral or any other agent of like value, and is much safer, inasmuch as from five to ten grains may be administered daily with perfect safety. It is remarkable that although this property of Boldoin was discovered by Doctor Laborde ten years since, this glucoside appears never to have received the study and experimentation to which it is entitled, though this may be due to the difficulty of obtaining it in commerce.

An Iconoclast.—

In looking over the files of the *International Journal of Microscopy and Natural Science* we ran across the following by its editor with reference to the so called phagocyte theory:

Fascinating theories of science, especially in the department of bacteriology, are often dressed up in popular and glowing language long after those theories are scientifically exploded.

Mutes in Medicine.—

It is declared that in New York State there is a deaf-mute physician who has succeeded in building up an excellent practice. This would seem to evidence that while "speech is silver, silence is golden;" also that "the less the doctor says, the more he is supposed to know."

Items and News.

Laboratory Doctors.—

Laboratory doctors, with troops of dogs, guinea-pigs and rabbits, and numerous cultures of bacteria, are busily at work solving the vexed problems of diseases and teaching their benighted brethren those facts which, as Josh Billings says, "ain't so."

The energies of the active practitioner are occupied in relieving the sick and suffering around him, and recording the facts learned through careful clinical observation and experience.

The laboratory doctor is exposed to many dangers. The pernicious habit of generalizing from a few experiments or an isolated occurrence, is almost sure to seize him; the light of the laboratory lamp has something fatal about it, changing impassioned prejudices into rational convictions; beautiful theories, promising a scientific and accurate solution of troublous questions, beset him until he forgets, in admiration of the edifice, that any inaccuracy in the foundation is liable to precipitate into the dust the most imposing superstructure ever reared.

These and a thousand like perils crowd the path of the laboratory doctor from which his brother, the active practitioner, is comparatively free—free because the ideas, inspirations, theories, which constantly appeal to the brain of every intelligent physician, are daily subjected to clinical test, a very satisfactory brake for headlong ambition.

The medical profession must make a stand, and refuse to accept without remonstrance or dispute the teachings of laboratory physicians, unless they are content to accept the philosophy of the ostrich, and by closing their eyes deny the existence of the interrogation marks which so plentifully intersperse these brilliant theories.—*Medical Brief.*

Rewards for Fecundity.—

The Province of Quebec has a law bestowing one hundred acres of government land upon every father of a family who has twelve living children, issue of a lawful marriage. Up to the present 174,200 acres of rich agricultural land have been given away in bounties to 1,742 fathers of twelve or more children, who have complied with the conditions of the Act. Not all of these proud fathers, however, are satisfied with the amount of the bounty, for instances of twenty or more children are not rare, and the parents of these want a proportionately higher reward for their patriotic efforts. Paul Belanger, of Riviere du Loup, wants 300 acres, and bases

his claim upon the fact that he has thirty-six living offspring. Another claimant is Mr. Theoret, of St. Genevieve, whose wife, but thirty years of age, has presented him with seventeen children—has in fact just given birth to triplets for the second time in five years, and moreover had twins three times. Mr. Theoret hopes to acquire a large portion of the Province if his wife will continue to do her share.—*Exchange.*

Premeditated Suicide.—

I ask a glass of water, or of claret, or of beer;
I go to kiss a pretty maid—she turns away with fear;
I eat some lemon jelly that's been standing on the sill;
And they tell me all are loaded—warranted to kill.

I put a pencil to my lips; I gulp down pounds of air;
I visit all the cattle at the Wayback County Fair;
I buy a paper of a boy, and handle dollar bills;
And they tell me every one of these has that on it which kills.

I'm not much up in science, but I know a thing or two;
I know that if I do not eat or drink or kiss a few
Of these fashionable, dreadful germs, I certainly will die,
For I'd have to give up breathing to escape the bacilli.

Bacteria, Bacteria! I'm not afraid of you!
The world will roll around the sun for all that you can do.
So on dollars and on papers and on kisses and on food,
Just hand me common bacilli—I'm not a science dude.

And what's the use of living if you cannot eat or drink,
If pretty girls and dollar bills, and even printer's ink,
And country fairs and pencils are only other terms
For the rapid transit system of the scientific germs.

—*Judge.*

The Mutilation of Landscapes.—

Lord Rosebery deserves the thanks of the community for raising his voice against the hideous method adopted by advertisers of quack nostrums and other purveyors of proprietary articles, of fixing boards in conspicuous situations in the midst of sylvan scenery throughout the country. Experience shows that certain pill-concoctors have been the worst offenders in this respect, one being English and the other American. In an interesting letter, however, received from the English agent of the latter manufacturer, we are informed that the practice will be discontinued, and that as soon as the contracts with the farmers on whose land the boards have been fixed run out, the offending and unsightly structures will be removed. This deference to public opinion affords us undisguised pleasure to chronicle.—*Medical Press and Circular.*

Actions Louder than Words.—

A prominent Western surgeon was once called to attend a young gentleman who had a badly lacerated scrotum. One testicle was somewhat injured, and was protruding from the wound. The surgeon was making preparations to remove the testicle, and while doing so learned that the young man was studying for the ministry. He immediately restored the testicle to its proper place and sewed up the wound.—*Kansas Medical Journal.*

Unsexing of Women.—

When will the profession realize that the "craze for operating" that has seized many physicians has led them to unsex and mentally destroy numbers of women, more for the sake of figuring as operators than on account of any good that would be done the patient? We know of no cases where Tait's operation was a benefit to the victim, and of many where it was an injury.—*Medical Epitomist.*

Explosive Compounds.—

A French lecturer, in speaking of the dangers of polypharmacy, enumerated explosion as one. He had collected several formulas of this anarchistic quality, among them being liniment of tincture of iodine and turpentine; another a mixture of chromic acid and glycerin; a third a tooth-powder composed of pulverized charcoal, cinchona bark, and chlorate of potassium.

The Medical Doyen of Ontario.—

Doctor Case, of Hamilton, is said to be the oldest practitioner in Ontario. He graduated in medicine at the age of twenty-two, in 1822, and is consequently ninety-four years of age. He says he is just as strong to-day as ever, with the exception of a lame back, and has never tasted intoxicating liquors or eaten meat.—*The Canadian Practitioner.*

A Medical Monk.—

Daum Sauton, a Benedictine monk and doctor of medicine, who recently returned to Paris from a mission both religious and scientific to the lepers of the Scandinavian Peninsula, has started on an extended tour among the lepers of Asia Minor and Greece, and will ultimately visit Japan and the Sandwich Islands.

A Centenarian.—

A woman is now living in a home for the aged in Sables d'Olonne, France, who was born in 1790, being therefore one hundred and four years of age. She is in full possession of all her faculties, and receives daily a number of visitors, entertaining them with her lively conversation and witty repartee.—*Medical Record.*

A Lucid Definition.—

"After all, what is a kiss?" said young Mr. Warren, after pressing the lips of his Boston *fiancé*.

"A kiss," replied Miss South-Church, "is the anatomical juxtaposition of orbicularis muscles in a state of contraction."

Inoculation and Snake-Bite.—

It is reported that for centuries preventive inoculation has been performed in Dutch Guiana for immunity from the poison of snake-bite. The gland from the snake, dried and pulverized, is used.—*Chicago Medical Times.*

Effect of Darkness upon the Cornea.—

When a dark-eyed man who had been continuously immured in an unlighted dungeon in Salzburg, Austria, for fifteen years, was brought into the light, it was observed the black eyes had become of a light blue hue.

Then and Now!—

Three score and ten the Bible says
Is man's allotted term;
But that's before the doctors made
The microbe and the "germ."
—*Truth.*

Mercies!—

Male mosquitoes do not bite, and only male frogs can sing. Finally, all kinds of insect life, so far as known, are tormented with some form of parasite.

Is it So?—

A dress-reform advocate asserts that a man should not marry a lady whose waist measures less than twenty-five inches.—*Indian Medical Record.*

The Plague.—

Europe has been visited 196 times by this dire malady, which in 1346 killed half a million of the inhabitants of Bagdad in less than three months.

Book Reviews.

RAILWAY INJURIES, WITH SPECIAL REFERENCE TO THOSE OF THE BACK AND NERVOUS SYSTEM. By Herbert W. Page, M.A., M.C. (Cantab.). Cloth; 8vo; pp. 157. Price, $2.00. Wm. Wood & Co., New York.

Mr. Page is well known to the medical profession through a work upon "Injuries of the Spine and Spinal Cord and Nervous Shock," published in 1883, in which he boldly attacked the theory of spinal concussion as advanced by Erichsen and generally accepted.

This volume is a record of the author's extensive experience since the publication of the former work, and affords additional proof that the tenets expounded in 1883 are both logical and correct. Case after case and observation after observation are presented in such a convincing way that there would seem to be very little room for doubt as to the true nature of those nervous phenomena following railway injuries which are unattended by organic disease of the nervous system. That all the views expressed are not proved beyond doubt, is not surprising, since even the author himself admits that future investigation must clear up some of the clouds of mystery which yet surround certain classes of railway injuries. The volume carries positive evidence and conviction on every page, and impresses the reader with the fact that the author has endeavored to consider the subject in a thoroughly scientific and judicial manner. The chapters on "Fright Neurosis," "Treatment," and "The Medico Legal Aspects of Railway Injuries," are well worth the attention of every neurologist, and will not be amiss even to members of the legal profession. The book is a rarity in that it renders plain much which in previous works devoted to the same subject has been left unfinished or obscure.

THE SCIENCE OF VITAL FORCE. By W. R. Dunham, M.D. Cloth; 16mo; pp. 198. Price, $1.00. Damrell & Upham, Boston.

The object of this volume, as stated by its author, is to designate and demonstrate the fundamental principles of the science of vital force—a department of natural science that is directly applicable to the preservation of health and the treatment of disease; it is implied in fundamental principles and laws of nature not yet recognized and presented for consideration. Doctor Dunham further claims that the theory of the science of vital force fits every form of disease, and acts in relation to nutrient material with normal surroundings to produce health; with non-nutrient

material and abnormal surroundings to induce disease.

We must admit that we do not fully grasp the intent of this volume, yet we recognize it as possessing a vast amount of material of scientific value, that especially recommends it to practitioners of medicine; also a recognition, too long neglected, of the psychical relations of disease. Doctor Dunham himself declares that the theory he enunciates belongs to a department of science that will require a large amount of literature to illustrate its practical application to individual and national affairs, and that it also implies a revolution of recognized plans and principles—"a revolution as significant as was effected in the ideal change in the centre of the solar system, the principles involved being as capable of a positive demonstration."

THE AMERICAN HOMŒOPATHIC PHARMACOPŒIA. By Joseph T. O'Connor, M.D. Fourth edition, revised and augmented. Sheep; 8vo; pp. 521. Price, $5.00. Boericke & Tafel, Philadelphia.

This work stands in relation to homœopathy in much the same position as the United States Pharmacopœia to the general profession. Such a work must necessarily be of value not only to the homœopathic physician, but likewise to all others who are interested in homœopathic remedies or their mode of preparation. In these days when homœopaths are writing prescriptions, it certainly is incumbent on the pharmacist to have a copy of that work which gives a standard, so to speak, to homœopathic preparations. Even to those who have no *penchant* for homœopathy, such a volume is interesting as giving a key to the therapeutic resources of a large number of medical men.

The work appears to be very complete, likewise concise, and must be invaluable to the medical student of the *similia* persuasion. Already the reviewer has found it of material benefit in supplying information regarding preparations for which inquiry is often made, and of which no knowledge can be obtained through any other source.

MYXŒDEMA, CRETINISM, AND THE GOITRES, WITH SOME OF THEIR RELATIONS. By Edward T. Blake, M.D., M.R.C.S. Cloth; 8vo; pp. 89. Price, 3*s*. 6*d*. John Wright & Co., Stone Bridge, Bristol.

The burden of this book is the septic or the infective nature of disease. The points which the author more particularly seeks to establish are: that Graves' disease in women is an autotoxis most frequently caused by the absorption of purulent products, that process being aided rather than induced by the toxines of terror or shock; that the same products lead to the production of rheumatism in males by acting in the same locality, viz., on the medulla oblongata; that if these products abolish the functions of the thyroid, the result is myxœdema; that if these products invade the cortex in large quantity and abruptly, the result is psychoses, such as mania, epilepsy, or other neurosis; if the invasion be more gradual and the poison more diluted, chorea follows. Much of this is, of course, hypothetic, and deals with a provisional pathology. The monograph is a most interesting one, and moreover very instructive aside from the theoretical considerations advanced by the author.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 a year. Charles Scribner's Sons, New York.

The September number has a notable list of contributors: F. Marion Crawford writes of "Bar Harbor;" Thomas Nelson Page begins a story entitled "Little Darby," which is to be concluded in October; Carl Lumholtz has another paper on "Tarahumari Life and Customs;" Octave Thanet writes of "The People of the Cities;" Mrs. J. T. Fields offers a very entertaining literary reminiscence under the title of "A Third Shelf of Old Books;" Mrs. Fanny D. Bergen, under "Tapestry of the New World," describes old-fashioned quilts and coverlets; Philip Gilbert Hamerton writes of Checa, a Spanish artist, whose striking picture "An Unlucky Meeting" is the frontispiece of the number; George W. Cable's serial "John March, Southerner," describes a marriage in Dixie; a story by Gaston Fay is entitled "The Folly of Mocking at the Moon." "The Point of View" includes Notes on an Object Lesson, Public School Classes, Provincialism, and The Return of the Townsman. There are poems by Harriet Prescott Spofford, Inigo Deane, and others.

FLINT'S PRACTICE OF MEDICINE. Edited by F. P. Henry, M.D. Cloth; 8vo; pp. 1143. Price, $5.00. Lea Brothers & Co., Philadelphia.

The issue of a new edition of the Principles and Practice of Medicine is of importance to the profession. It is well known that Austin Flint, Senior, was gifted with extraordinary powers of clinical observation as well as great literary aptitude, and hence was especially fitted to describe disease in a series of literary pictures that will never lose their value, since time does not impair "a delineation true to life." In this new and seventh edition the editor has omitted general sections on pathology, in conformity to recent custom of relegating such to special

works; space has thus been gained for the necessary enlargement of paragraphs devoted to treatment. The work as a whole remains, as it ever has been since its original issue in 1866, the representative text-book in its class.

LITTELL'S LIVING AGE. Price, 15 cents; $8.00 per year. Littell & Co., Boston.

The biographical sketches given by *Littell's Living Age* constitute one of its most attractive features. Recent issues give us two or three of special interest: No. 2610 contains, under the title of "The Wicked Cardinal," a delightfully readable article on Cardinal de Retz. A paper that will be, perhaps, more extensively appreciated, is a long and valuable sketch of "Handel: Man and Musician," by Frederick J. Crowest, in No. 2612.

Each number of this magazine can be relied upon to contain something to suit every taste. Its field is so wide and its range of subjects so limitless, that it cannot fail to interest and instruct.

IN THREE STATES. Paper; 12mo; pp 28. Price, 15 cents. Published by Charles Lee, General Passenger Agent L. V. R., Philadelphia.

This is truly a work of art, and descriptive of the line of the Lehigh Valley Railway through the States of New Jersey, Pennsylvania, and New York. It is abundantly illustrated by woodcuts, and also a number of most elegant plates in colors. Altogether there are fourteen of the latter, many of which, from an artistic standpoint, would be worthy of framing. Notable among these is a view in New York Harbor; Lafayette College at Easton, Pa.; Views in South Bethlehem, Pa.; A View Near Lehigh Gap; Sunset in the Wyoming Valley; Taughhannock Falls; and An Ice-Bridge at Niagara in Winter.

FROM START TO FINISH. Published by Johnson & Johnson, New York.

This is one of the most elegant advertising pictures it has been our lot to encounter. It is a most vivid cotton-picking scene, printed in colors, 18x32 inches, while in the sky above is a representation of the finished product as prepared for the surgeon. Thus we have the "start" and the "finish." In the space outside of the print, between it and the imitation frame, are given representations of mustard and belladonna plants, and likewise of the specialty packages of Johnson & Johnson. This picture is given to dealers who purchase $28.00 or over of goods from Messrs. J. & J.

Therapeutic Brevities.

Calomel in Hepatic Ascites.—Jendrassik recalls attention to the diuretic properties of Calomel and its value in cardiac, nephritic, and hepatic dropsies. Nephritic complications, however, when thus treated, do not yield so satisfactorily as do cardiac, and opinions differ with regard to the benefits to be derived in hepatic affections. Palma describes a series of cases of liver disease, comprising patients with and without ascites, in which this condition, when present, was secondary. There was a remarkably beneficial result in four of the ascitic cases, the urine being increased three- to ten-fold in quantity, causing disappearance of the fluid in the abdominal cavity and all subjective symptoms; in the other two, treatment gave no results, the patients dying of advanced disease and cholæmia. Very slight diuresis only, though attended with improvement, was produced in two patients whose disease was unaccompanied by any evidence of œdema or ascites; but great relief was afforded with increase of urine to a ninth and last patient suffering from ascites due to secondary carcinomatous disease of the liver. The Calomel was given during successive periods of three days, separated by intervals of one to three days, being given either in repeated doses of four and one-half to nine grains daily, or in quantities decreasing from fifteen to six grains per day. Two periods sufficed in the cases quoted, and stomatitis and diarrhœa were obviated by means of chlorate-of-potash gargles and opium, the latter only failing rarely and temporarily; no renal or cardiac irritation was induced. The manner of action is not quite evident to Palma, who, however, inclines to the view that Calomel has a direct action on the kidneys and liver, as the failure of the drug in two of his cases to produce diuresis was to be attributed to the advanced disease, no kidney lesion being found post-mortem.—*British Medical Journal.*

Alstonia Constricta in Tuberculosis.—Three months ago, I first made use of Alstonia in a case of pharyngeal tuberculosis, where the temperature ranged from 100° to 101°. The persistent cough and gradual decline made the diagnosis certain. The exacerbations being very troublesome and persistent, I gave Alstonia every four hours, with the result that the chills ceased immediately, and the patient became better for a long time. The remedy was given only three or four days, and then discontinued. Two months later the chills again returned, occurring every

other day; he had three or four chills before attention was called thereto. The Alstonia was given as before, with the same good result; the chills not only ceased, but the patient showed marked evidence of improvement otherwise; so the remedy was continued in same dose three times a day. Five days from the re-ordering of the drug, the pulse, which had before ranged from 96 to 100 per minute, dropped to 76 for the first time since his illness began. The temperature that had persistently stood at 100° and over for weeks, became normal, and there was general amelioration of all the symptoms.

The evidence was so plain that I cannot consider it as a mere coincidence, and I believe further investigation will prove this drug to be a valuable addition to the therapeutics of tuberculosis.—Doctor Wm. S. Turner, in *Chicago Medical Times.*

The Value of Caustics in Malignant Growths. — Doctor Parmenter, of Buffalo, says many claims are made for caustics, viz.: That after their use recurrence is less frequent; that the various agents of this class have a selective action; and that reduction in size of the enlarged lymphatics is obtained.

These claims are not well grounded. The value of caustics lies in the selection of a proper agent, the selection of proper cases, and use in conjunction with common sense. A proper caustic is one which entirely destroys the diseased tissue, and it should be rapid in action, burn all the diseased tissue without spreading over too extensive a surface, and mitigate pain as much as possible. Suitable cases are those located in a favorable anatomical situation, and those in which there is no involvement of lymphatic glands.

Doctor L. Duncan Bulkley, of New York, adds that caustics are used chiefly by quacks, still they have their uses. They are indicated in the early stages (useless after metastases, extensive ulceration, or glandular involvement); also in the formative period, and in epitheliomata in accessible regions.

The best form is a mixture of wheat flour, arsenic, cinnabar, ammonia muriate, mercury bichloride, and zinc chloride. Mild caustics are useless, and silver nitrate of no value whatever.

The New Mydriatic. — Doctor Guttman gives an account of numerous observations made by him with Scopolamine hydrochlorate in solutions of 1 to 1000, 2 to 1000, and 4 to 1000. In the normal eye the second solution produced maximum mydriasis in ten to thirteen minutes; in the inflamed eye after ten to thirty-five minutes—four to seven days being required for the narrowing of the pupil, and three days for the return of pupillary reaction to light; fifteen to twenty minutes produced some anæsthesia of the cornea. The accommodation became paralyzed after three minutes, this condition reaching its height after forty minutes, when it was more intense than after a one-per-cent. atropine solution. It was very valuable in keratitis, parenchymatosis, and iritis, but even the 2-to-1000 solution was no more effective than a one-per-cent. atropine preparation. Scopolamine, being non-poisonous, can be used every hour, and even under these conditions but rarely induces dryness of the throat, and even then this symptom, which is temporary, requires no treatment. It is most valuable for children, in whom it can be used two or three times a day during long periods without unpleasant results.—*Therapeutische Monatshefte.*

Value of Combining Heart-Tonics.—Convallaria majalis is a simple cardiac tonic and a safe remedy, in action similar to digitalis, but not so marked; it causes slowing and increases the force of the heart-beats. But it will frequently be found, in lessening compensation, that convallaria, strophanthus and digitalis individually fail or disappoint after a time; and then a combination of all three often produces an effect little short of marvellous. Once or twice in recent years I have been called in consultation over cases of advanced mitral disease, in which central failure has shown itself by extensive dropsy of the limbs, œdema of the lungs and liver, and a general water-logged condition of the system. On inquiry as to the exhibition of digitalis, the reply has been, "He has had it," with perhaps a like response as to strophanthus and convallaria. But they had not been given collectively; and when this was done, benefit speedily accrued to the patient, and credit to his medical advisors.—Doctor Taylor, in *The Clinical Journal.*

Arsenic and Cancer.—Among the ingenious and plausible suggestions emanating from Mr. John Hutchinson, is the possibility of the evolution of epithelioma being facilitated by a long course of arsenic. In his well known paper on the subject he alleged a number of instances in which there was certainly presumptive evidence of arsenic having thus favored the evolution of the cancerous outbreak. At a recent meeting of the Clinical Society, *à propos* of a case of multiple epithelioma following a course of arsenic, he

called attention to certain peculiar changes in the skin of the palms and soles, which in his opinion indicate that it is time to withdraw the drug, viz., a furfuraceous thickening of the skin in those situations. Attention is called to this statement in order that others may avail themselves of any and every opportunity of ascertaining how far the suggestion is confirmed by clinical observation.—*Medical Press and Circular.*

Mudar Leaves in Eczema.—An Irish lady, of Mussoorie, about forty years of age, had been suffering from eczema, extending from the axilla to the tips of her fingers, for nine years. There was family history of rheumatism, but the patient herself had no symptoms thereof. By accident I was asked to try a poultice of Mudar leaves (*Calotropia cortex*), but commenced cautiously, as the case was a very bad one, and the slightest exposure to air caused the inflamed parts to weep copiously with serous exudation—so only applied the poultice to the fingers. On the second day the weeping had stopped, and the parts looked healthy. The poultice was continued for another two days, when the fingers were healed. Encouraged by this result I applied to the whole arm, and, miraculous to relate, this was well within a week.—Doctor J. Morton, in *Indian Medical Record.*

Strophanthus for Dipsomania. — Doctor Skworzow accidentally discovered the value of this drug in the case of an old toper of sixty-three years, who during dipsomaniac attacks was accustomed to drink large quantities of brandy. Strophanthus was given, on account of weak heart's action and an intermittent pulse, in doses of seven minims three times a day. After the first dose the patient was seized with nausea, and had such permanent repugnance to alcohol that he stopped stimulants entirely. Two other cases were attended with similar success. In all the Strophanthus produced nausea and profuse sweating, symptoms rarely observed in abstemious persons. It is worthy of note also that in no instance was the sudden withdrawal of alcohol followed by delirium, as is usually the case.—*Lancet-Clinic.*

Erysipelas and Malignant Tumors.—Doctor W. B. Cooley, after two years of investigation with erysipelas toxines, arrived at the following conclusions:

The remedial action of erysipelas upon malignant tumors is an established fact; this action is much more powerful in sarcoma than in carcinoma, and is chiefly due to the toxines of *erysipelas streptococcus*, which may be isolated and used with safety. By the addition of toxines of the *bacillus prodigiosus* the action is greatly increased—the toxines to be of value should be derived from a virulent culture, and likewise specially prepared.

The results obtained are without danger, and quite equal to those derived from an attack of erysipelas, hence inoculation should rarely be resorted to.—*American Journal of the Medical Sciences.*

Spartein in Chloroform-Anæsthesia.—Langlois and Maurange (*Gazette Médicale de Paris*) recently stated to the Paris Society of Biology that, governed by the influence of Spartein in regulating the action of the heart and diminishing the excitability of the pneumogastric nerve, they were led to employ it for the avoidance of the cardiac depression that sometimes supervenes upon the inhalation of chloroform. Their experience included, in addition to experiments upon animals, one hundred and twenty observations upon man, sometimes in the presence of cardiac disease, sometimes when the operation was protracted. They injected from one-half to three-fourths of a grain of Spartein, together with one-eighth grain of morphine, fifteen minutes before beginning anæsthesia.

Ether as an Anæsthetic.—In *Upsala Läkareforenings Förhandlingar*, Doctor Söderbaum declares against the exclusive use of chloroform. In seventy out of one hundred and thirteen cases he found that it required less than five ounces of Ether to produce narcosis, and in children an average of less than fourteen drachms—no children under one year were anæsthetized. In rare cases where more than three ounces of Ether had been administered and the patient was still agitated, and likewise in some operations upon the mouth and face, he had recourse to chloroform. On the other hand, patients with compensatory diseases of the heart were allowed to inhale Ether without any fear.

A Characteristic of Assafœtida. — A pronounced characteristic, one not generally known, is a sensation of emptiness and weakness with distention and beating in the stomach and abdominal viscera, accompanied by intestinal rolling and gurgling. The gas is nearly always with difficulty discharged, but escapes easily through the mouth with numerous forcible and loud eructations, which give relief—in this it closely resembles nitrate of silver. Obstinate constipation often accompanies this condition.—*Cincinnati Lancet-Clinic.*

Broncho-Pneumonia.—Doctor Sutliff, in the *Occidental Medical Times*, recommends the employment, in small and frequently repeated doses, of tincture of Veratrum Viride. To nursing infants he gives but a fraction of a minim, to older children more, every two or three hours. By this means the frequency of the pulse is reduced, respiratory acceleration diminished, and finally is evinced a general change for the better.

Vomiting of Pregnancy.—A writer in *The Lancet* (London) says: "I have not failed once for many years, by a single vesication over the fourth and fifth dorsal vertebræ, to put an end at once to the sickness of pregnancy for the whole remaining period of gestation, no matter at what stage I was consulted. The neuralgic toothache and pruritis pudendi of the puerperal condition yielded as readily, and to one application."

Iron Oxalate in Anæmia.—Doctor Hayem writes the *Wiener Medicinische Presse* that he has employed Iron oxalate for several years in the treatment of chlorosis, and prefers it to all inorganic preparations of the metal. He first administers during meals two pills, each containing one and one-half grains; the dose subsequently being increased to four and one-half to six grains, if well borne.

Gastric Ulcer.—Doctor Emanuel Senn reports a case in which success followed the administration of tablespoonful doses of Olive Oil every two hours. It is believed the good effect of this remedy is due to its local action, lubricating the denuded surface, decreasing friction, and preventing contact of the irritating gastric juice upon the diseased area in the stomach.—*Exchange.*

Quinine Solution for Hypodermatic Medication.—*L'Union Médicale* shows that the Hydrochlorate is the most soluble of all the quinine salts, and, being richest in alkaloid, is the most available for hypodermatic use. The sulphovinate is less desirable for this purpose. Analgesin increases the solubility of quinine salts.

Neuralgia and Cholera Infantum.—Doctor Boden, of Trebigne, South Austria, declares he has been surprised at the quick results obtained with Lactophenin in both neuralgia and cholera infantum: it seems to succeed when other measures fail. It is also employed with benefit in the summer complaints of children.—*Berliner Klinische Wochenschrift.*

For Asthma.—Doctor McIlvaine prescribes:

℞ Iodide of ammonium, 2 drachms.
Fl. ext. Grindelia robusta, 4 drachms.
Normal liquid belladonna, 10 minims.
Tincture lobelia, 1 drachm.
Syrup wild cherry, 1 ounce.
Water, 2 ounces.

Teaspoonful every three or four hours.

Tongue-Tie.—Chervin, having made numerous studies upon the subject, finds that cutting the frænum for tongue-tie, outside of cases where the shortness of the frænum prevents the child from nursing, is useless. It does not in the least improve the child's speech. —*Le Progrès Médical.*

Pimples and Comedones.—According to the *Indian Medical Record*, a lotion of alcohol three ounces, and salicylic acid one drachm, will cause a prompt disappearance of these unsightly facial blemishes.

For Ulcers and Fissures.—Compound tincture of Benzoin is recommended by Doctor H. S. Purdon. Labial and lingual fissures, he declares, quickly heal under this application.

Gonorrhœal Cystitis.—Doctor Friedlander recommends the employment of fluid extract Pichi (P., D. & Co.'s) every four hours in drachm doses.—*Pharmaceutical Products.*

An Essential Aid in Labor.—Normal parturition is facilitated, and the pangs of the acme of the second stage best mitigated, by use of a small quantity of Chloroform.

Acute Rhinitis.—For relief of urgent distress, Cocaine and tincture Belladonna—from three- to five-per-cent. strength of the former —applied on cotton.

To Abort Furuncles.—Apply with a compress, Chloral hydrate in the proportion of half an ounce to an ounce each of glycerin and water.

For Hæmorrhoids.—When piles are prolapsed and inflamed, and operation refused, paint daily with tincture of Iodine.—IVANOFF.

Medical Progress.

THE PLAGUE IN CHINA.—Doctor E. C. Baber gives a most exhaustive report of the disease as it appears in the valley of the Salween. Approaching the river, he discovered the valley was uninhabitable during the summer months on account of the malaria, the natives retiring as soon as the fields are planted, and only returning in autumn to reap the crops. To the question of what becomes of the travelers, the answer was given that very few pass during the hot season, and they hurry through before sunrise. Marco Polo's remark is also borne out by the official topography which, describing this spot, Tu-shu Laoch'eng, says: "The Lu River, anciently called Hu Hu, is met with twenty miles south of Yung-ch'ang. The mountains on both sides are exceedingly steep, and its exhalations are so poisonous that it is impassable during summer and autumn." Baber adds: "The air of the place was curiously hot; the thermometer, well shaded, stood at 96°, but irregular blasts were wafted from the southeast which scorched like the breath of a furnace. Walled in by precipitous mountains, and wooded with clumps of exceptionally fine trees, the unhappy valley is picturesque in the highest degree. Small rounded hills are dotted about its floor; the rice-fields cover a great space, but very few, probably not a tenth part, are now under cultivation. It is by far the lowest depression in Western Yünnan, and runs nearly due north and south as far as the eye can reach, with an average breadth of about two miles. Looking up that low avenue walled by precipices, one cannot suppress a certain sentiment of solemnity."

Such is the description of what may be called the *Plague Metropolis*. Of the disease itself Baber has many things to say:

"Its approach is indicated by the eruption of one or more minute red pustules, generally in the arm-pits, but occasionally in other glandular regions. If several pustules appear, the disease is not considered so hopeless as when there are few. The sufferer is soon seized with extreme weakness, followed in a few hours by agonizing aches in every part of the body; delirium shortly ensues, and in nine cases out of ten the result is fatal.

"It often happens that the patient suddenly to all appearances recovers, leaves his bed, and affirms that beyond a slight sensation of weakness he feels thoroughly convalescent. This is invariably a fatal sign; in about two hours the aches return, and the sufferer dies.

"True recovery is always very gradual. This is the account given us by a French missionary, who has spent half a life-time in Yünnan. The native version includes all the above facts, but involves them in a cloud of superstitious accessories: for instance, all parts of the sick-room are occupied by devils; even the tables and mattresses writhe about and utter voices, and offer intelligible replies to anyone who questions them.

"Few, however, venture into the chamber. The missionary assured me that the patient is in most cases deserted like a leper, for fear of contagion. If an elder member of the family is attacked, the best attention he receives is to be placed in a solitary room, with a vessel of water by his side. The door is secured, and a pole laid near it, with which twice a day the anxious relatives, cautiously peering in, poke and prod the sick person, to discover if he retains any symptoms of life.

"Père Fenouil witnessed many cases of the disease, and lived in infected towns. He attributes his own safety to the precautions he took of fumigating his premises, and keeping charcoal braziers constantly burning—to such an extent, indeed, that his house on one occasion actually took fire. He states that not only human beings, but domestic animals, and even rats, are attacked by the pestilence.

"Its approach may often be known from the extraordinary movements of the rats, who leave their holes and crevices, and issue on to the floors without a trace of their accustomed timidity, springing continually upwards from their hind legs as if they were trying to jump out of something. These rodents fall dead, and then comes the turn of the poultry; after the poultry have succumbed, pigs, goats, ponies and oxen successively die off."

In 1882 the disease was epidemic in parts of Kwang-tung, and Doctor Lowry, then stationed at Pakhoi in the service of the Imperial Maritime Customs, had a good opportunity of investigating it. In the Medical Reports* he declares it commenced at the end of March and lasted for three months, or till the latter part of June; at Lien-chow, some twelve miles distant, a similar outbreak raged with more or less severity till August. He speaks of it as a comparatively new disease, but learned that a few cases occurred every year, agreeing thus with its ordinary sporadic tendency. Out of a population of about 25,000 he calculated that the deaths amounted to between 400 and 500. Its virulence he attributed, and doubtless with reason, to the peculiarly filthy condition of the town.

*No. 24, April–September, 1882.

Here, as elsewhere, the disease had first attacked the rats, who came out of their holes and died on the floors of the houses. Buboes, and inflamed glands generally, were marked, so that there is no difficulty in diagnosing the disease. The principal symptoms are high fever, glandular swellings and buboes, sallow skin, heavy odor from breath, delirium, general drowsiness, and coma. Filth and want of ventilation, accompanied by high temperature, are the predisposing causes. He described the disease as a specific contagious fever of short duration, accompanied by glandular swellings, and very fatal; in some respects most resembling typhus, but also with some apparent relation to dengue. According to Doctor Armand, in Persia many patients who recovered from a similar disease, which there occurred synchronously, were marked with indurated anthrax.

In Pakhoi the malady seems to be endemic, the average annual death-rate amounting to from forty to sixty. From February last to the middle of May, the severity of the disease (according to the British Consul, Mr. Fraser) has, in common with other districts, immensely increased, the deaths up to the middle of the latter month amounting to from 300 to 400.—*The China Medical Missionary Journal.*

THE BURST-UP OF LISTERISM.—Since its inception I have been professional heathen enough to disbelieve in and to deride this folly. I have watched for many years with mingled amazement and amusement the pirouetting of Sir Joseph Lister among "putties," gauzes, calicoes, and steam-engines, in order to kill spores and thus prevent suppuration, decomposition, etc.; and I predicted that if Sir Joseph continued in the course in which he was incontinently following, he would ultimately arrive at the point where he originally departed from common sense. I maintain that this prediction has been verified. In his recent address to the Glasgow University Medico-Chirurgical Society, Sir Joseph Lister threw a bomb, much to their consternation and chagrin, among his obsequious flatterers and adulators. Originally, and for as long a period as anything has reigned in "antiseptic surgery," the shibboleth was that suppuration was due to germs floating in myriads in the atmosphere, and the "scientific" method to prevent this suppuration was, as held by the worshippers of this fetish, to kill these germs, and hence Sir Joseph Lister's numerous appliances and devices, all of an ephemeral nature. At the meeting above referred to, Sir Joseph performed what it is to be hoped will be his last antiseptic somersault, in advising the surgical acolytes of Glasgow to pay no attention to atmospheric germs, but preparatory to any operation to bathe the skin with, and immerse the instruments in, a certain solution of carbolic acid. Thus Sir Joseph is back to carbolic acid, which is a very inferior antiseptic, and he has now no theory of atmospheric germs, and hence whatever there was novel in his theory and treatment disappears by one coup. If it be "Listerism" to apply "antiseptics" to wounds, to enjoin cleanliness, and to prevent the access of "gross dirt" to wounds, then there was "Listerism" before Sir Joseph was born, and there will be after many generations of surgeons have passed away. But Sir Joseph has discovered a new "antiseptic" pet; he tells his audience that certain cells termed phagocytes kill the germs, and by their gustatory intervention prevent suppuration, decomposition, disease, etc. Now, I venture humbly to assert that there is no more scientific evidence of the existence of "phagocytes" which comport themselves in this manner than there is for the existence of witches, and of the two beliefs the latter appears to me to be the more reasonable. I read in a recent number of an influential medical contemporary that Sir Joseph Lister had been awarded the Albert Medal of the Society of Arts "for the discovery and establishment of the antiseptic method of treating wounds and injuries [What *is* this?], by which not only has the art of surgery been greatly promoted and human life saved in all parts of the world, but extensive industries have been created for the supply of materials for carrying the treatment into effect." If it be "science" to give a transient impulse to the manufacture of "putty" and calico, then I have certainly misinterpreted the term "science" during all the years that I have lived. —D. CAMPBELL BLACK, M.D. (Professor of Physiology in Anderson's College, Glasgow), in *Medical Press and Circular.*

PARASITISM, SYMBIOSIS, AND COMMENSALISM.—When one organism lives in or upon another, and feeds at that other's expense, as an unbidden guest without benefiting its host in any way, we call the condition Parasitism. But there are many cases where the two beings form a physiological partnership, and these are generally included under the name Symbiosis. The members of the firm may be both animals, or both plants, or one may be an animal and the other a plant. In some the association is so close that it is exceedingly difficult to determine that they are indeed two beings and not one. For many

years, for example, in some radiolarians little yellow bodies had been noticed. They were seen to possess a well defined nucleus and a cell wall, and they were looked upon at one time as spores, at another as secretory cells; but later it was found that, though the radiolarian might die, yet the yellow bodies would survive and multiply. They were, in fact, minute algæ, and, though they lived in the radiolarian, the host and the guest both prospered; for the host gave off carbonic acid and nitrogenous products, which formed the best food for his guests, the algæ; and these in their turn evolved oxygen, and so supplied one of the chief wants of the radiolarian. Each profited by the association. In other cases the union is much less intimate, and these have been differentiated by name under the term Commensalism. There is a hermit crab who carries about with him, attached to his shell, or even to his claw, a sea-anemone. When the crab feeds, the anemone shares the feast, and, moreover, enjoys the benefits of free locomotion, though little able to move itself. In its turn it serves to protect the crab by hiding him, and may also aid in killing or numbing his prey; and when the time comes that the crab must seek a new shell, he carefully assists his partner to change his home, thus showing how greatly he appreciates the union. An acacia tree finds itself in danger of destruction by ants and other insects, and enlists in its service a tribe of ants who are not only innocuous but ready to fight for the plant and keep off its foes. But the ants are true mercenaries, and will not serve without pay, and for them the tree provides food and shelter—hollow appendages (stipules) to live in, and nutrient fluids on which they may feed. Then, when the foes appear, they rush out and drive them off. The allied phenomena of Parasitism, Symbiosis and Commensalism illustrate in a marked manner the interdependence of organisms, and bring home to us in a picturesque manner the fact that few are able to live only for and by themselves, but that it is the common lot by serving others to serve ourselves.—*The Lancet* (London).

HEMIPLEGIA AFTER DIPHTHERIA.—Edgren, after alluding to the rarity of records, refers to Auerbach's case. This was one in which an apoplectic attack left a typical hemiplegia in a patient with acute nephritis following diphtheria; apart from this the symptoms of ordinary diphtheritic paralysis developed. The hemiplegia was looked on as the result of a hæmorrhage into the anterior two-thirds of the posterior arm of the capsule. The persistence of the motor paralysis made it almost certain that it was not the result of uræmia, and the mode of commencement excluded embolism. The hæmorrhage may be explained by the alteration in the vessel-walls which results in all infectious diseases, or by the elevation of blood-pressure consequent on the severe nephritis. Edgren records a similar case of his own. He is of opinion that the paralysis is of cerebral origin, and that the internal capsule of the opposite hemisphere is the seat of the lesion—most probably a hæmorrhage which is so far related to the diphtheria that the vessels become degenerated and rupture through the infectious disease. As in the multiple neuritis of the ordinary post-diphtheritic paralysis, so also in the rare hemiplegic form, changes occur in the blood-vessel walls from the effects of the toxines circulating in the blood.—*Indian Medical Record.*

HERMAPHRODISM.—In the *Western Medical Reporter* Doctor G. Bergenzelli notes the case of an Italian, thirty-eight years old, in whom existed the pelvis of a male, and external genitals constituting a vulva with labia majora, at the superior extremity of which was the base of a well formed penis six centimeters long, increasing three centimeters during erection. The glans was well formed, with a slit in its inferior part ending in a culde-sac; the prepuce adhered to the nymphæ, and a median raphe in the lower surface led to the meatus and presented in its extremity Pozzi's frænum. The vagina was narrow, and digital examination revealed the presence of a uterine neck. Menstruation had been regular since the age of eighteen, and the individual has had sexual relations with both male and female—has aborted twice, but never impregnated a woman.

MORBID ANATOMY OF RABIES. — Golgi thinks that the morbid process of rabies is a parenchymatous encephalo-myelitis, of which the exciting cause is not exactly known, but the changes in which appear to be: Leucocyte infiltration, peculiar cell-division with the appearance of nuclear chromatin and nuclear movement in nerve cells with diffuse vascular distension and all the phases of karyokinesis, but no true nuclear division: Cellular changes with swellings, vacuolation, bladder-like transformations, nucleolar displacements, varicoses, and granular and fatty changes in the cells and neuroglia cells, and: Rapid changes in the intervertebral ganglia and nerve elements.—*Indian Medical Record.*

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Original Articles.

MASKED FEVER—"FEBRE INTERMITTENTE LARVADA."*

BY DOCTOR JOAO V. T. HOMEM.†

I. The masked intermittent fevers sometimes appear under the simplest guise, and sometimes assume a grave aspect, constituting a true pernicious fever; I will here deal only with the simple form.

Although in a certain number of cases masked paroxysms are attended by some febrile heat, without precedence of chills or termination by sweating, as a general rule they manifest themselves without the slightest increase of temperature to indicate the existence of fever. At times the morbid phenomenon constituting the paroxysm is preceded in its appearance by a sensation of cold experienced in the soles of the feet, the tips of the fingers, or the spine; again, the cessation of this phenomenon coincides with a profuse perspiration, or with one hardly noticeable and confined to certain regions, as the forehead, neck, and trunk. Usually no symptom is observed which could be attributed to a genuine intermittent paroxysm; and were it not for the more or less regular periodicity with which the phenomenon (or group of phenomena) dependent on malarial infection manifests itself, the diagnosis would be very difficult.

In some cases the paroxysms of simple masked fever are replaced by well marked legitimate attacks, and this occurs either spontaneously or after the use of the first doses of quinine. In others, the simple masked fever is followed by a regular pernicious paroxysm, of extreme gravity, which almost always is fatal. There are, lastly, cases in which the masked paroxysms are reproduced during many days, and, in spite of not being recognized and properly treated, show always the same mildness; but these latter are exceptions to the rule.

We not rarely meet with a masked intermittent fever in a person who, having suffered previously from simple paroxysms, was not radically cured; in this case minute examination of the abdominal viscera almost always reveals the existence of the lesions proper to malarial poisoning.—Case 1 is an example of this very important class.

Masked fever rarely coincides with malarial cachexia, and when this does occur the morbid phenomenon representing the paroxysm is only manifested after the patient has been subjected to methodical and appropriate treatment and finds himself much relieved of the chronic disease; this I had occasion to observe twice in the Misericordia Hospital.

The quotidian type is that noticed in the great majority of cases; the double-tertian and tertian appear at times; the quartan is excessively rare—I have never met it.

Neuralgias, external or visceral; hæmorrhages, especially hæmoptysis and epistaxis; delirium, hallucinations, soporose sleeplessness, insomnia; convulsive spasms, partial convulsions, tonic or clonic; dyspnœa; cough; hoarseness; præcordial oppression; vomiting; diarrhœa—such are the morbid phenomena usually periodically manifested which are produced by malarial infection, and constitute the paroxysms of masked intermittent fever.

Doctor Dubové* reports some interesting cases in which incontinence of urine, conjunctivitis, and other pathological conditions, manifested themselves under the influence of malaria, without the slightest febrile reaction, the patients recovering completely under the use of quinine.

The neuralgic form of masked paroxysms is without any doubt that most frequently ob-

* From "Estudio Clinico sobre as Febres do Rio de Janeiro."

† Translated by Surgeon Geo. P. Bradley, U. S. Navy.

* De l'Impaludisme, 1867.

served in Rio de Janeiro—the same thing happens in other countries where malarial affections are common, as all foreign authors report. Neuralgia of the fifth pair, chiefly of its supra- and infra-orbital branches, is, of all intermittent malarial neuralgias, that most frequently presented.

If masked paroxysms occur in a person suffering from any sort of disease of the respiratory system, particularly from chronic bronchitis or pulmonary tuberculosis, they are characterized by severe hæmoptyses, which resist ordinary treatment and yield only to quinine. Sometimes simple predisposition to phthisis, hereditary or acquired, suffices for hæmorrhages from the lungs to constitute the masked fever. These periodical hæmorrhages are common with us.

I might here report a great number of cases of masked intermittent fever, one of each species or class, to give a precise idea of the immense variety of a form of disease little known in the countries of Europe where malarial miasm has no great ætiological importance; but that would too greatly extend the limits of this paper, and the mere interest excited would not duly compensate, especially after what has been said above; yet I think it of much benefit to offer a *résumé* of six important records, the first two of which refer to grave cases, because they all afford particularities of high import to the practical physician.

Case 1.—Joao Delfim Pereira, twenty-nine years old, Brazilian, collecting clerk for an important business firm of Rio de Janeiro, went, on the 12th December, 1871, to the town of Iguassú (a malarious place) to collect some dues; he remained here for the space of forty days without experiencing the slightest inconvenience to health. On the 26th January, 1872, at 6 P.M. he was seized with a severe stitch near the left nipple, which hindered him in breathing, coughing, and moving the body. He had recourse to various stimulating liniments, sinapisms, and dry cups, without much relief.

On the morning of the 27th, after making use of a mixture of muriate of morphine and laurel-water prescribed by a physician, he found himself much better. At 6 P.M. the same day the same pain reappeared, but so intense and accompanied with such great dyspnœa that the attending physician thought fit to hear the opinion of a colleague upon the case. I was called at ten o'clock at night, and found the patient bathed in profuse cold sweat, reclining on a bolster, unable to turn to either side, with a face expressive of agony, fighting against a genuine orthopnœa, with a pulse small, hard, and frequent, yet completely apyretic. The pain in the left side of the chest had all the characteristics of an intercostal neuralgia, with its three points of exacerbation; the corresponding thoracic wall remained almost motionless during the inspiratory and expiratory movements, and respiration was almost wholly diaphragmatic. In the left lung was noted merely some lessening of vesicular murmur. The heart's action was quickened; the tongue covered with a thin coat of white fur. There was some thirst and complete anorexia.

After hearing the patient's history, examination led me to diagnose masked intermittent fever of neuralgic form; whereupon I suggested a saline purgative, catharsis to be followed by thirty grains of quinine in three doses.

In the afternoon of the 28th, the stitch, which had entirely ceased at 11.30 in the morning, did not appear. The quinine continued to be given, in decreasing doses, on the 29th, 30th, and 31st, and 1st and 2d February. The cure was radical on the 3d.

Case 2.—Samuel Chadwick, native of the United States, thirty-four years old, watchmaker, born of a tuberculous mother, and very apt to contract bronchitis, had pneumonia in July, 1869, from which he barely recovered; it was only in October that he was able to return to his shop. On the 13th March, 1870, after experiencing some chilly sensations, he had a violent hæmoptysis at 8 P.M., which became much less intense with the use of dry cups to the ribs, sinapisms to lower extremities, and a mixture containing one scruple of tannin, half a drachm of ergotin, and one ounce of syrup of diacodium (poppies). He spat blood at various times during the 14th, and at 11 P.M. the hæmorrhage reappeared profusely, without any benefit from the same remedies. This time the improvement was coincident with the use of two whites of eggs dissolved in a glass of water, recommended to the patient by a neighboring apothecary. On the 15th, about 7.30 P.M., he was seized again with shivering, similar to that on the 13th, followed by a third hæmoptysis and frequent fainting spells. Having seen the patient shortly after the appearance of the hæmorrhagic paroxysm, and presuming, from what I have just reported, that it was a case of masked fever of double

tertian type, in spite of finding him completely apyretic, I prescribed a pint of sulphuric lemonade strongly acidulated, holding in solution thirty-six grains of quinine, to be given in wineglassful doses hourly.

At two o'clock in the morning the patient took the last dose of the remedy, the hæmorrhage having entirely ceased one hour before. I continued to give quinine in the same dose on the 16th and 17th; in the dose of twenty-four grains on the 18th and 19th; twelve grains on the 20th, 21st, and 22d. The hæmoptysis ceased to occur from the morning of the 16th, and the patient recovered completely after a long convalescence and after having made a journey to the interior of the province of Minas.

Case 3.—Elisa, child seven years old, lymphatic and very feeble, had whooping-cough, complicated with intermittent fever, during six months. She took a great deal of quinine uselessly, as she only managed to recover from either disease after they had taken her to Theresopolis, where she used cold baths.

In August, 1871, being in her parents' house on a farm in San Christovao, she was attacked for the first time, at nine o'clock at night, by a nervous spasm, marked as follows: One hour after going to sleep, she awoke suddenly, overcome by great fright, and had some convulsive movements of the arms and facial muscles, which were succeeded by genuine trismus—a condition that lasted about half an hour, and gradually yielded as the body became bathed in perspiration; her linen was then changed, and she slept quietly until the next day.

For twenty-eight days, and always at the same hour, when the child slept, the same phenomena were regularly reproduced; and copious sweats always appeared the instant the attacks ended. The disease being considered as depending on the presence of intestinal worms, various anthelmintic remedies were employed, but without the least benefit, the child passing merely three *ascarides lumbricoides*.

Having been consulted by the physician in attendance, I diagnosed masked intermittent fever, and advised the use of pills of sulphate and valerianate of quinine, combined with small doses of extract of hyoscyamus. Under this treatment the child entirely recovered within six days.

Case 4.—Raymundo Ferreira dos Passos, Brazilian, forty-two years of age, contracted intermittent fever in the province of Espirito Santo, where he had been residing for five years. The paroxysms, which were of variable type, continued to appear after he removed to Rio de Janeiro, and ceased only after the use of large doses of quinine, as well as arsenical treatment according to the method recommended by Boudin. As soon as the patient became free from the intermittent fever, he forsook the remedies prescribed by his physician, and did not take the least precaution in his mode of life.

One month after supposing himself entirely well, he was seized, at two o'clock in the morning, with an acute pain in the sternal region, attended by a sense of constriction in the præcordial and epigastric regions (angina pectoris), extreme oppression, dyspnœa, and dry guttural cough; this paroxysm was prolonged to six o'clock in the morning, having been accompanied by a very profuse perspiration.

Four similar paroxysms had occurred, at nearly the same hour, when I was called to see the patient in consultation. Two physicians had already been seen, and both believed it to be a case of organic lesion of the heart. My examination took place at the time the paroxysm was ending, and revealed the following: External appearance that of incipient malarial cachexia; tongue extremely furred; loss of appetite; epigastric pain, increased by palpation; liver enlarged; spleen swollen; constipation; axillary temperature normal (99° F.); pulse 95, a trifle weak and small; skin covered with cold and clammy perspiration; præcordial area normal; heart's action accelerated, impulse increased — smooth systolic bellows-murmur perceptible over all the cardiac region, but more intense at base of organ; respiration frequent (40); chest resonance normal, before and behind; some sibilant râles discoverable from posterior aspect, both sides; entire absence of moist râles; slight cough, no expectoration. The urine was not analyzed.

In view of the history given (and duly completed by the attending physicians), and not being able, after the examination made, to admit the existence of a heart-lesion, and as little an idiopathic asthma (as the patient's family seemed to believe), I diagnosed masked intermittent fever of neurotic form, complicating the course of malarial cachexia. This judgment was fully confirmed by the happy result achieved by the treatment proposed and accepted, of which the salts of quinine formed the essential part.

Case 5.—Leopoldo, thirteen years old, strong and of good constitution, residing in the Rua do Catumby, began, contrary to his habit, to feel an unconquerable drowsiness as soon as night-fall came. He slept profoundly

during the whole night, and woke next morning very well but with slightly furred tongue. In spite of the efforts he made to subdue his desire of sleeping, in spite of the means he resorted to to keep awake and pursue his studies, he was compelled to lie down, and at once fell asleep. This circumstance was repeated for nine days consecutively, without the slightest febrile reaction; the boy was much annoyed, for he could not prepare his lessons, and his parents became uneasy as they feared some serious disease might be impending.

Having been consulted in regard to the significance of this invincible sleep, always at the same time, and foreign to the habits of the boy, I advised that he be given six grains of quinine at one o'clock in the afternoon, and a like dose at three. The night of this day, the child did not have the sleepiness of the two previous, but had some fever, which ended in profuse perspiration at eleven o'clock.

For four days the quinine was given in doses of twelve grains daily, and continued in half doses during the three days succeeding. At the end of this time (seven days) the lad had returned to his former condition of health: had no more somnolence or fever.

Case 6.—A young Portuguese woman, feeble and lymphatic, twenty-two years old, normal in function, and residing in the Rua Formosa, was attacked at 9 P.M., 27th August, 1873, by severe paroxysms of cough, lasting the space of two hours, and completely prostrating her. During the rest of the night, and during the 28th, she coughed very little; but as soon as bed-time drew near, the spasms reappeared, with the same intensity as on the previous night, and, like those, without expectoration, and without the appearance of fever. The same scene was reproduced for twelve days, despite the use of empirical remedies advised by the mother, and calmative and narcotic mixtures prescribed by the family physician. It was suspected to be a case of hysterical cough, and bromide of potassium combined with muriate of morphine was employed for six days, without the least benefit. The patient was now convinced she was consumptive, and consequently became sad and melancholy, lost her appetite, and was attacked by insomnia; even after the cough ceased, she found it impossible to go to sleep, and spent the night in thinking of disease and death.

It was at this time that her father brought her to my consulting-room, where I examined her carefully. Percussion and auscultation revealed nothing abnormal in the respiratory system; the girl was, however, very pale and debilitated. Giving due importance to the previous history, and to the absence of significant symptoms which might explain the frequent and pertinacious cough which seized the patient every day, at the same hour, I concluded that it was a case of masked intermittent fever, and advised the use of pills composed of sulphate and valerianate of quinine, and extract of opium. Ten days after, having again seen the young woman, I found her perfectly recovered, and ascertained the cough had entirely disappeared the fourth day after using the quinine. The anæmic condition and loss of appetite still remained, however, for which was prescribed a preparation of iron, with cinchona and gentian.

Masked fever does not always assume the intermittent type. While in the majority of cases that is the type observed, in others, less rare than some foreign pyretologists think, the morbid phenomenon depending on malaria takes on the frank remittent type, with or without febrile reaction; in the neuralgic form especially this latter type is common.

The disorders of the digestive system, so frequently produced by the open attacks of intermittent fever, are often manifest in the course of masked fever, and serve then as a powerful aid to diagnosis. In some cases, despite the absence of fever at the time of the paroxysm, the latter, when it passes off, leaves as a vestige a gastric trouble that is evidenced by a furred condition of the tongue, loss of appetite, and bad breath. Again it is the liver that is congested and painful. More rarely the spleen is found enlarged,—splenic pain (the splenalgia of Dubové) as a vestige of masked fever has not been observed by me in a single instance.

II. The origin of malarial infection producing masked fever is found sometimes in natural marshes, sometimes in accidents, sometimes in turning up of ground in the city streets, exactly in the same way we see frank intermittent fever develop. It is not rare for paroxysms to appear in the course of an acute disease, usually inflammatory, or when it has reached its limit and the patient is about to become convalescent.

There are cases where the physician observes the regular and periodic manifestation of a morbid phenomenon which yields to the use of quinine, without anything authorizing

him to admit the presence of malarial miasmatic infection. In these cases the drug is of avail through its antiperiodic action, and not through its specific virtues.

III. If in many cases the patient's previous history greatly clears up the diagnosis of a masked fever, and renders it easy even for an inexperienced physician (as in Cases 1 and 4), in others the practitioner needs both experience and sagacity to promptly recognize the nature of the disease.

Residence more or less prolonged in a marshy locality; precedence of open and legitimate intermittent paroxysms; the white or yellowish coating of the tongue; increase of size of the liver and spleen, attended by pain, spontaneous or excited by palpation and percussion; the course followed by the pathological phenomenon characterizing the paroxysm, and the inefficacy of the therapeutic means generally advised to combat this phenomenon; these are the elements of diagnosis of which we avail ourselves, and which almost always guide to the path of truth.

When splenic pain is observed, as Doctor Dubové has observed it in several cases—that is, independent of congestion of the spleen, and without the least change in the liver—the diagnosis again will become easy, inasmuch as splenalgia, with the characteristics described, exists only exceptionally without malarial poisoning.

IV. Masked fever is ordinarily followed by a pernicious attack, after a greater or less number of paroxysms; this transition is observed above all in the neuralgic form. In 1871 there died in Rio de Janeiro a skillful advocate, victim of a violent pernicious attack which supervened on a neuralgia of the trifacial. This neuralgia presented during six days the well marked remittent type, and yet the patient did not take the smallest dose of quinine.

V. In the treatment of masked fever, the same methods should be followed as for the frankly intermittent; the doses of quinine ought to be at the beginning from twenty-four to thirty-six grains, in view of the imminent danger threatening the patient, even when the paroxysms appear of the greatest benignity. Agreeably to the nature of the phenomenon constituting the paroxysm, there should be joined to the specific medicine other therapeutic means, either combined in the same prescription (if the combination be not opposed to the rules of pharmacology) or given in a separate one—as is almost always preferable. Thus, for instance, if the attacks are characterized by neuralgias, belladonna, hyoscyamus, opium, stramonium, valerian, the preparations of zinc, etc., should be administered, together with the salts of quinine. If the form of the paroxysms be hæmorrhagic, astringents as well will be indicated; if vomiting appears, anti-emetics must be employed, etc. Everything that has been stated in regard to the treatment of regular intermittent fever is fully applicable to masked fever.

Rio de Janeiro, Brazil.

PERINEO-URETHROTOMY IN DEEP STRICTURES OF LARGE CALIBRE.

BY G. F. LYDSTON, M.D.

The indications for perineal section in urethral strictures in general, are pretty well understood, hence there is no necessity for a repetition of the principles which guide in the selection of the operation in the ordinary forms of intractable deep stricture. There is one form, however, which is not infrequently diagnosed, but is not supposed to indicate an operation which is considered a formidable one (often justly so).—I refer to linear strictures of large calibre occurring at or posterior to the bulbo-membranous junction. Intractable strictures in this locality should be made to bear a large amount of the obloquy which is heaped upon spasmodic stricture, chronic prostatic irritation, localized chronic inflammation at the bulb, posterior urethritis, etc. While everyone is familiar with the usual gonorrhœal or traumatic stricture in this location, few recognize the markedly irritable, resilient, linear stricture, of large calibre. Such strictures will usually admit a good-sized sound, in most instances with some pain that is generally referred to a tender membranous or prostatic urethra which may or may not coexist. Behind this relatively slight coarctation, chronic inflammation always exists, and infectious material is always present. Drainage is never secured, because of the normal tonus of the cut-off

muscle, and a certain residuum of decomposed urine is practically always present. The impediment to drainage is enhanced by the existence of chronic spasm of the musculo-membranous region and the surrounding muscle group, and is much greater than would be supposed from the size of the sound which the stricture will admit. In many cases it is difficult to convince either the patient or his medical adviser that an organic stricture exists, because, forsooth, the urethra has apparently been gradually dilated up to its full size by sounds. The symptoms, however, are not relieved, and marked so-called vesical irritability persists, and probably is intensified by the sounding. Chill and fever are by no means infrequent concomitants; urethrorrhagia is occasionally seen; and there is but one way in which the diagnosis is practicable, namely, by the use of the *bougie exploratrice* of Guyon—a flexible rubber affair with a comparatively hard bulb presenting an abrupt shoulder; with this a distinct *snap* can be appreciated as the shoulder is withdrawn, and such is sometimes even perceptible to the ear of the patient, and always manifest to him by the sensation produced in the urethra during withdrawal of the instrument; also upon the shoulder of the instrument will be found the characteristic pasty secretion which forms behind the point of contraction. The pain and tenderness excited by this manœuvre are excellently well localized; indeed the localization of the pathological urethral area is far more accurate than is possible with the urethroscope. Because of the reflex spasmodic contraction of the deep urethra under instrumentation, it is possible to detect strictures of this kind with a very small exploring bulb; moreover it will be found rather difficult to get a bulb of even moderately large size through the irritable coarctation. Where lesions in the anterior urethra coexist, the pain, tenderness and spasm incidental to exploration of the deep urethra are greatly enhanced.—It must be understood that the changes in the mucous membrane, as demonstrated by pain, tenderness, spasm, and muco-purulent secretion, developed on exploration, are greatly in excess of what might be expected from the amount of injury or organic narrowing of the canal; the same must be said of the greatly increased frequency of micturition. This is not difficult of explanation when we take into consideration the anatomy and physiology of the region involved: A severe urethrismus, reflexly excited by the inflamed and contractured area, reacts mechanically upon the sensitive tissues and still further increases the pathological conditions present; another important factor is the imperfect drainage produced by the spasm. The close proximity of the lesion to the prostatic urethra, the mouths of the ejaculatory duct, and the bladder, is a constant menace to the latter viscus, posterior urethra and testes, and even the kidneys; in fact this lesion is of all others the most likely to produce infective inflammation in these structures.

I find these cases are variously classified by the different physicians through whose hands they pass, and in a general way may be tabulated as follows:

Cases under treatment for chronic anterior urethritis—in these there really exists some anterior lesion in many instances:

Those which have been sounded, injected and endoscoped *ad nauseam* for the purpose of curing a posterior urethritis:

Those diagnosed and treated as chronic cystitis:

Cases in which no effort is made to ascertain the ultimate cause, the patient having been treated for recurrent inflammation:

Cases under treatment for deep organic or spasmodic stricture, a diagnosis of which has been based entirely upon deep urethral irritation associated with a certain degree of obstruction to the passage of the sound, and perhaps occasionally spasmodic retention of urine.

So frequent is the condition under consideration that I am always suspicious of its existence where the deep urethra resents the passage of the sound. In very many the sound passes with moderate facility, but the symptoms of vesical irritation and abdominal discomfort are either exaggerated, or at least not at all benefited, by the treatment. I have already spoken of urethral chill, but will add that a large-calibred resilient stricture of the deep urethra is the condition *par excellence* which is likely to give rise to chill and fever from the simple passage of the steel sound. Stretching of the extremely sensitive stricture

band, and disturbance of the septic area, give rise to sepsis and shock which can hardly fail to develop chill and fever in greater or less severity. In some cases secondary infection occurs with quite serious consequences, and I have at present under charge a physician who developed perineal abscess and urinary fistulæ some years ago, for which no cause could be found. He employed a No. 28 (French) sound, and the more it was used the worse he grew. After four years of recurrent abscesses and fistulæ, he presented himself, declaring he never had symptoms of deep stricture, but had been cut for anterior strictures. I found a No. 30 (French) sound entered the bladder with comparatively little difficulty though with some pain; but with a No. 20 Guyon's bulb I succeeded in demonstrating a distinct narrow band at the bulbomembranous junction. Here was the explanation of the trouble. The theory of idiopathic urinary abscess disappeared promptly before a history of an almost forgotten gonorrhœa, and the presence of an actual organic contraction of the deep urethra. Perineal section was suggested, and performed with complete success.

It may here be remarked this patient could not have been convinced of the necessity for operation had he not already exhausted all other methods of treatment. If it had been a more recent case, I have no doubt he would have been informed by some of my *confrères* that to propose operation would be preposterous, if not criminal, and a good-sized sound would have been flourished before the patient as evidence of his urethral capacity. I hope some good genius will one day succeed in convincing physicians that the calibre of the pathological urethra with the sound *in situ* is not always a fair criterion of its calibre when the sound is out; and especially is this true of the elastic, resilient, cord-like stricture.

With regard to the treatment of these lesions, there is in my opinion but one method worthy of consideration, namely, the perineal *boutonniere*, division of the band, antiseptic flushing of the infected area, and more or less prolonged drainage. Subsequent sounding completes the cure. I maintain this operation is logical, safe, and likely to secure a radical cure. From the standpoint of the possibility of shock and sepsis, a radical operation *via* the perineum is infinitely safer than divulsion, internal urethrotomy, or even gradual dilatation with sounds.

In conclusion I would respectfully insist the sound should no longer be considered as a crucial diagnostic test in such cases; that it is of no value in diagnosis, and worse than useless in treatment. Also I would urge the endoscopist to remember that the condition which I have described can neither be accurately diagnosed nor successfully treated by endoscopy in the majority of instances. "Render under Cæsar the things which are Cæsar's," and cease demanding impossibilities of those exceedingly valuable instruments—the sound and the urethral endoscope.

PUERPERAL ECLAMPSIA.*

BY J. C. MC ALLISTER, M.D.

Angus McDonald, in 1878, expressed his belief that puerperal convulsions are due to acute anæmia of the brain, resulting from arterial contraction due to irritation of the vaso-motor centres by excrementitious principles retained in the circulation on account of renal insufficiency.

While it is true that certain bacteriologists report the discovery of micro-organisms which cause not only convulsions but also nephritis, and that the blood and fluids of animals thus inoculated will in turn produce convulsions, the above statement by McDonald, attributing the convulsions to faulty elimination due to insufficiency of the kidneys, gives a correct clue to all necessary therapeutic action, and is sufficiently accurate for all practical purposes.

The toxæmia of pregnancy, of which eclampsia is a legitimate result, may then be stated to be an excess of excrementitious principles in the blood.

The kidneys, owing to the existing dual life, have a greater amount of work to do, and, being handicapped by undue pressure by the fœtus upon the renal blood-vessels, may become subject to organic lesions.

The presence of albumen in the urine has been supposed to have a determining influence

*Read before the State Medical Society of Pennsylvania.

on convulsions, but in a series of examinations conducted by Doctor Gardner of the Maryland Maternité the following conclusions were reached:

The presence of albumen in the urine of a pregnant woman is not sufficient cause for a prognosis of probable eclampsia:

The failure to find albumen in the urine of a pregnant woman is no evidence of the absence or a continuance of the absence of the condition which gives rise to puerperal convulsions:

Albumen is so frequently found in the urine of patients immediately after the appearance of convulsions that we are justified in making the statement that the albumen is the result of convulsions.

Knowing, then, that there are excrementitious principles retained in the blood, the preventive treatment of eclampsia is evident, viz.: eliminative. The skin, bowels and kidneys may all be enlisted in this effort, by proper medication. Basham's mixture is an admirable preparation for the skin and kidneys, the muriate tincture of iron being not only an excellent diuretic but the best hæmic tonic, the necessity for which is great in these patients owing to the anæmia present. For the bowels, laxatives or hydragogue cathartics may be used, as necessary.

The pressure of the fœtus upon the renal or abdominal blood-vessels sometimes gives rise to œdema and its attendant complications.—In certain cases this condition can be relieved somewhat by having the patient occupy such position as may relieve the obstruction to the blood-vessels.

Although puerperal convulsions are of the most grave import, the materia medica abounds in superior means to combat this serious and dreaded condition. Venesection in the past has given excellent results, which in my opinion are due to elimination only; and in order to get the full benefit a large quantity of blood should be taken, some authorities demanding as much as forty ounces. In this disease, as in others, the cases for venesection must be carefully selected; and the serious objection thereto is that it deprives the patient of that upon which her life may depend in case of a complicated convalescence.

The bromides, though valuable as nerve sedatives, are not sufficiently powerful in action to control the convulsive seizures, consequently are not to be relied upon to the exclusion of more potent measures.

Chloral hydrate has been used extensively with much benefit, and should be given in full doses, largely diluted, whether administered by mouth or rectum. Recently an eminent French physician extolled the virtues of chloral, and advised its use in enormous doses; and if the convulsions occur prior to full term he allows pregnancy to continue. He also advised an active eliminative process by venesection in suitable cases and by medication in others.

Jaborandi has been spoken of favorably by many, and as an eliminative it has a proper sphere, but should not be relied upon to the exclusion of more serviceable drugs; further, it should be employed with caution owing to the danger of inducing pulmonary œdema, which is an occasional grave complication of eclampsia.

Morphine in full hypodermatic doses is often a serviceable adjunct, being analgesic, narcotic, and sedative; many report, under its use, partial or complete cessation of convulsions, with sleep for a variable period, and great increase in the quantity of urine passed. It should be given in large doses, as should all drugs which are administered for the relief of convulsions.

Chloroform by inhalation probably ranks the highest of all, especially with American practitioners, and many a seemingly fatal case has been saved by its judicious use. Its action is simply analgesic, hypnotic, and sedative, and in sufficient doses it controls reflex action so that nature is given a chance to recuperate. Its successful employment requires much judgment and skill; only enough should be exhibited to control the convulsions, and then only during the periods of pain and nervous manifestations which precede. This method claims the constant and full attention of the physician until the convulsive period is past. My esteemed friend, the late Doctor J. T. Waid, of Ridgway, Pennsylvania, treated fifteen cases by chloroform, and all recovered.

The method of treatment which remains for discussion has been left to the last, for I deem it of special importance and wish to give it more extended notice—*i.e.*, the treat-

ment by the hypodermatic use of tincture veratrum viride.

Eclampsia is associated with an extremely rapid and small pulse and high arterial tension; and there can be no convulsions without these clinical symptoms, since they are essential to spasm of the arterioles. In looking for therapeutic measures, then, the ideal is a drug which will slow the pulse rate to any desired degree; that will reduce arterial tension; that is practically free from danger; that can be administered while the patient is in any physical condition; and that will have an immediate effect. This ideal is found in veratrum. It is also of the greatest importance to employ an agent that has some physiological effect whereby it can be determined whether or not the patient is in danger of having more convulsions, without waiting for such to manifest themselves in order to demonstrate that the dose has not been efficient, as is the case in the use of the bromides, chloral, morphine, chloroform, and venesection. Convulsions cannot exist with a normal arterial tension and pulse-rate; and inasmuch as the physiological effect of veratrum is manifested by the pulse, it is a sure and ready means to determine the efficacy of the treatment.

It can be stated as a clinical truth that the elements of danger in toxæmia of pregnancy depend upon the presence of convulsions, as the woman without convulsions lives while the woman with convulsions dies. And as each convulsion is followed by still deeper coma and more stertorous breathing, the importance of using a drug which will be effectual and which will act with great rapidity is apparent. Doctor Geo. A. Hartman, of Baltimore, Md., writes me that within three minutes after a hypodermatic of tincture veratrum the pulse fell from 144 to 72 per minute. His experience with veratrum has been a happy one, this drug having proved eminently satisfactory in all the cases in which it was used, save one, and in cases which were rapidly going from bad to worse under orthodox methods already enumerated. In the one exceptional case there was no physiological action of the drug produced, although given in full doses.

It would seem, then, that the physician would be justified in giving veratrum, in so serious a disease, in sufficient dose, *whatever that may be*, to obtain the desired physiological action. Doctor Hartman has used in larger doses than I have found necessary; in one case he gave subcutaneously an initial dose of twenty minims of Norwood's tincture, and continued the drug in half-drachm to drachm doses by the mouth every hour for several doses, then gradually reducing to twenty minims, and leaving off entirely at the end of a day or so; he saw no bad results, and had no use for the brandy with which he had provided himself to combat, if necessary, the excessive depressing effect. I have given fifteen drops of the U. S. P. tincture as an initial dose, using whiskey or brandy as the menstruum—never more; in the six cases in which so used there was a return of the convulsions in one only, and this patient, a young primipara who had been married but three or four months, had convulsions before labor supervened, although at full term. The delivery was manual, the os being dilated with the hand until forceps could be used; she had two or three slight convulsions while delivering. In some cases there was no occasion to give a second dose, though as a rule it would be wisdom to continue the drug for a day or so, or until the convulsive period is fully past.

I would refer those who may be further interested in this subject to an article in the February number of the *Medical Brief*, by Doctor C. R. Rogers, in which he relates a case treated by the hypodermatic method, and states that of ten cases so treated all recovered. Aside from this, I know of no other published article on this method of treatment.

When there is not great stupor I have been in the habit of using morphine hypodermatically in conjunction with the veratrum, with the view that the patient will better endure the latter, aside from the beneficial action of the morphine in itself. It is also proper to use other sedatives; atropine also has given me wonderful service where the breathing was stertorous and labored; and inasmuch as convulsions predispose to pulmonary œdema, and veratrum moreover reduces respiratory action, atropine is especially indicated. In one case one-fortieth grain was given in divided doses within about twenty minutes,

with remarkable results, the greatly labored and stertorous breathing immediately becoming quite natural. Although atropine is physiologically antagonistic to veratrum, in my experience it does not manifest its action on the circulation adversely when given in conjunction with the latter.

The question of inducing labor or resorting to forcible labor when eclampsia occurs prior to full term, is a moot one. Professor Lusk, in a discussion before the New York Academy of Medicine, October 26th, 1893, said "that without emptying the uterus he had been able to do little more than stand by and watch the woman die." On the other hand, Charpentier of France regards eclampsia as a self-limited disease, and advises trying to carry the patient over by using enormous doses of chloral hydrate, and reports favorable results. One principle in therapeutics is to remove the cause of the morbid condition, but in the subject under discussion the apparent cause is eminently a physiological one. It would, however, seem proper to induce labor in those cases where there is positive evidence of organic lesions of the kidneys, and that are speedily becoming worse; and this can be done rapidly under chloroform, using the tampon at first, if necessary, and dilating with the hand until forceps can be used, or delivering by version. A superior article by Doctor Harris, on "The Dilatation of the Os with the Hand," was published in the January number of the *American Journal of Obstetrics*.

I append the clinical history of one case:

Mrs. J. B——, æt. 30; third labor; at the last gave birth to twins, at which time she had a great deal of œdema, but understood from her physician that it was a normal condition. In this labor, although the œdema was so great that she could not be recognized, she consulted no physician, and at eight months' gestation was taken with convulsions without warning. By the time I reached her she had had fourteen convulsions. I gave her at once a hypodermatic of thirteen drops of the tincture veratrum viride in a little whiskey. Up to this time she had had no labor pain, and there was no dilatation of the os. As I had no professional assistance, a neighbor woman administered chloroform while I proceeded at once to digital dilatation of the os, after which a pair of Comstock's forceps were applied. Although powerful traction was made, the os failed to dilate further; and the cord prolapsing and being found pulseless, perforation of the skull was advised, accepted, and the child speedily delivered. The after-treatment consisted in the proper attention to evacuation of the bladder and bowels, the continuance of small doses of veratrum viride, the use of moderate doses of chloral hydrate, of bromides and *Cannabis Indica*, and the employment for several weeks of Basham's mixture. There were no convulsions after the administration of the first dose of veratrum. Her recovery was continuous and uneventful.

Driftwood, Penna.

CLINICAL LECTURES AND REPORTS.

RENAL TUBERCULOSIS.

BY PROFESSOR GUYON.

There is at present in Necker Hospital a young woman afflicted with tuberculosis of the lungs, of the right kidney, perhaps of the left kidney as well, and of the bladder; the general conditions of this patient could not be worse, and yet I propose to perform nephrotomy of the right kidney. An operation so serious, on an organism so ill suited to the danger, cannot be undertaken on other than peremptory grounds, and these grounds I present:

A year ago the patient was tolerably well; later on she was forced to urinate with abnormal frequency, and at the same time the urine became turbid, albuminous, and slightly sanguinolent. These symptoms caused no pain, consequently she gave little heed thereto. Toward the beginning of 1894, however, she began to suffer from renal colic; this persisted only a short time, but was succeeded by a painful but quite endurable sensation in the kidney region of the back.

A month ago an abundant hæmaturia supervened, which vanished quickly but not completely; and since that time the urine constantly contains a slight quantity of blood, and from time to time considerable hæmorrhages occur.

The general condition of the patient is now markedly ominous; she is very emaciated, eats little, and decided febrile accessions of one to two degrees appear every evening.

There is tuberculosis of the lung apices, but it is evidenced simply by crepitance, for the presence of caverns cannot be made out, and the sputum is not characteristic.

On examining the urinary apparatus, one is first struck by the condition of the renal secretion, which contains remarkable quantities of pus, besides being sanguinolent. These two peculiarities are of great diagnostic importance. The pronounced suppuration points to a renal origin, and the same applies with even greater force to the persisting hæmaturia.—There is now in Necker Hospital indubitable confirmation of what has just been stated, in the persons of five patients who are suffering from various renal affections, and in all of whom the urine is hæmorrhagic; and these discrete hæmaturias have all persisted for a very long time. Further, the urine of this patient contains tubercular bacilli, which suggests the nature of the renal affection, be its origin what it may.

Passing now to the kidneys, I find the volume of the right increased to two-and-a-half times the normal, and the organ moreover is smooth over its entire surface. A very peculiar phenomenon, and a further argument in favor of a tuberculous affection, is the fact that this kidney, though decidedly diseased, is not at all painful when subjected to pressure.

The left kidney, which has been examined with the greatest care, is painful on pressure, but not apparently increased in size, neither has it changed its place, and one might almost believe it perfectly intact. But the patient has reported spontaneous pains on this side, which must be taken strictly into account; and, moreover, experience teaches that renal tuberculosis is almost always bilateral. Looking at the numerous pathological preparations of renal tuberculosis in the museum of Necker Hospital, one soon discovers that not in one case was one tuberculous kidney accompanied by a normal fellow. The degree of the affection, moreover, is most variable, and the tuberculous process may be very pronounced on the one side and but slightly so on the other; and such is true of this patient. My judgment is further corroborated by endoscopic examination, accomplished with some difficulty owing to excessive irritability of the bladder. The first result of such examination revealed tuberculous ulcerations in the mucous membrane of the viscus, forming a focus of infection which complicates the condition—and this fact has to be borne in mind while considering the proposed operation. The second result is the established presence of a certain quantity of blood and pus flowing out of the right ureter, which latter fact does away with all doubt that the right kidney is the seat of one or several pus-aggregates of tuberculous origin.

From the left ureter nothing was obtained of a pathological nature, but this negative result is of no value, since no clear urine is voided; with respect to the second kidney, it must accordingly be regarded as probable that it participates, though in less degree, in the malady that is so manifest in its fellow.

Here is a chronic tuberculosis, placing life in imminent danger; and yet I feel justified in performing nephrotomy, and it is my conviction, based upon experience in similar cases, that it will help the patient. The reason for operating is the persistent fever to which I have referred, and which, continuing for several weeks, and yielding to no remedy, appears to be the first cause of the semi-cachectic state that is manifest; and this cachexia will continue and soon cause death if there be no intervention. This fever, regularly exacerbated in the afternoon and evening, can arise only from retention of pus, and in this regard the right kidney alone can be taken into account; the certain suppuration of this organ and the enormous increase of volume are more than adequate proofs. If, then, I can overcome the retention of pus by a nephrotomy, the fever will be thus vanquished and the general condition of the patient improved.

One incalculable benefit will result from operative intervention, even though dealing with a patient afflicted with advanced phthisis with multiple foci. Tuberculosis is not, indeed, an unqualifiedly mortal disease, for a considerable number of subjects exhibiting a moderate degree of tuberculosis—as in the pulmonary and renal affections of this young woman—resist its ravages and eventually recover.

It may, perhaps, be urged that I ought to pursue the principle which guides me to its uttermost, and not rest content with a simple

nephrotomy, since, while this operation does away with the retention of pus in one tuberculous focus, it does not remove the focus itself, and that nephrectomy would fulfill the purpose better by removing the focus. Theoretically the argument would be incontrovertible, though not so in practice. Nephrotomy is infinitely less radical than nephrectomy; and the latter, owing to the general condition of the patient, might prove fatal. Furthermore, the right kidney, though strongly affected, yet performs its function in a certain measure, and if now the left is also involved, much is gained by preserving ever so little of the organ operated upon.

After nephrotomy, the affection may present itself in two different forms, a knowledge of which is very important from a prognostic point of view: Either there will be a very voluminous gathering of pus, standing by itself and thus forming a large tuberculous cavern in the kidney, or there will be a certain number of small, disseminated caverns in various parts of the renal parenchyma. The first form—and this is the most promising feature in such cases—is by far the more frequent; but the operation will expose the entire focus, so everything can be cleansed, disinfected, and touched with zinc chloride, healing being thus promoted. In the second form it is very difficult to open up all the little foci, and endeavors to gain access thereto are dangerous since they involve the risk of hæmorrhage; and do what one may in such a case, the operation remains incomplete. It goes without saying that the therapeutic results in the last-named form are much more insignificant; but I repeat, these forms are very rare, and the dread of encountering such a case should not restrain the surgeon from interfering.

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The operation, as predicted, revealed a tuberculous cavern filled with pus, urine, and tuberculous masses. The wall of the cavern was cleansed and touched with zinc chloride, the edges having previously been sewed to the external wound to avoid any possible infection from the pathological liquid.

The results of the operation were very simple: On the very evening of the day thereafter, the patient's temperature fell, appetite returned, and her general condition was improved. As surmised, the renal abscess proved to be the sole cause of the cachexia, and, as this was speedily overcome, she had the best of chances for recovering from other tuberculous foci.

SURGICAL CASES TREATED IN ST. MARY'S HOSPITAL AND FREE DISPENSARY.*

BY H. O. WALKER, M.D.

During the three months ending April 1st, 1894, the hospital afforded thirty-four cases for surgical treatment. Of these, two were in an extreme condition at the time of their admission, and proved fatal soon after, without the possibility of help from either operative or non-operative measures; twenty-four required operative treatment; for the remainder, either surgical dressings or symptomatic treatment sufficed. These are briefly as follows:

Case 1. — J. G——, German, aged 66 years, developed symptoms of melancholia, and while in this condition (January 2d, 1894) unsuccessfully attempted suicide with a razor — little more than the skin and superficial cervical fasciæ were divided, though hæmorrhage was profuse. The skin was shaved, bleeding vessels tied, drainage provided for by means of a strip of iodoform gauze, and the wound dressed antiseptically. Patient discharged February 21st.

Case 2.—Miss L. R——, aged 21, of tubercular heritage, entered January 9th, with enlarged cervical glands; these had been increasing in size steadily for five years, were painful as well as unsightly, and counter-irritation and internal medication yielded no permanent benefit. January 10th an attempt at removal was made, but they were found so seriously matted together and adherent to the important structures of the neck that the incision was closed and the wound allowed to heal, which it did by first intention.

Case 3.—Miss M. S——, aged 23, entered January 23d, having enlarged cervical glands similar to Case 2. The swollen condition had been observed only eight months, yet during this period the whole region had become so thoroughly matted that the attempt at removal was abandoned and the wound closed.

*Reported by F. B. Walker, M.D.

Experience has repeatedly demonstrated the gravity of these cases and the extreme care necessary in operating. However desirable it may seem to remove every enlarged and enlarging gland, occasionally it is extremely hazardous and unadvisable.

Case 4.—W. S——, aged 59, in August 1892 noticed a swelling in the region of the right parotid that continued to enlarge up to May 16th, 1893, when he entered hospital and was relieved by operation. The severing of the facial nerve resulted in paralysis of some of the facial muscles. In the beginning of 1894, swelling was observed in the region of the submaxillary gland, and on February 8th this tumor, sarcomatous in nature, was excised and the inferior maxillary bone at this point thoroughly scraped. The wound healed rapidly, and the patient was discharged February 17th.

The following was the only case received in which the chest was involved:

Case 5.—E. B——, aged 17, was found unconscious, having received a gunshot wound of the chest, presumably from a Flobert rifle. He was brought to the hospital as soon as possible, but lived only eight hours after the accident. Post-mortem revealed the missile had entered the chest an inch below the left nipple, passing backward and to the right through the left lung and both ventricles of the heart, to lodge in the soft tissues an inch to the right of the spine. Considering the nature of the injury it is surprising the patient lived as long as he did.

Case 6.—H. K——, aged 51, had a right inguinal hernia for thirty years, during the last few of which no truss was worn. Three years since, unusual strain preceded an enlargement of the tumor, which thereafter remained hard. January 6th, while in a partially intoxicated condition, he entered hospital, complaining of pain in bowels, nausea, vomiting, and no stool for four days—all the result of intestinal obstruction due to impaction of fæces. Cathartics were freely given, followed by an enema of glycerin and water, of each four ounces, and two hours later a second enema containing half an ounce of magnesium sulphate. After another two hours a copious injection of soap and water was administered, when the bowels moved freely and the patient was relieved. January 8th he was up, and, receiving permission to take a walk, failed to return.

Case 7.—J. A——, aged 45, claimed to have never had any venereal disease. He entered hospital February 21st with a bubo in left groin. This was opened, curetted, and the cavity packed with iodoform gauze. Discharged March 13th.

Case 8.—Miss M. O. B——, aged 46, always enjoyed good health, but at times constipated. During six months had suffered pain in the rectum, intensified during defæcation and even by laughing and coughing. Examination revealed an anal fissure and the presence of two polypoid growths. The latter were excised, the anus forcibly stretched, and the surface of the fissure scraped. All disagreeable symptoms disappeared and the wound healed quickly.

Case 9.—J. G——, aged 25, had been annoyed with internal hæmorrhoids for seven years. Hæmorrhage had occasionally occurred, once with such severity as to cause alarm. March 2d he was relieved by the clamp-and-cautery method.

Case 10.—S. B——, aged 36, entered February 28th with a five years' history of both internal and external hæmorrhoids. A year ago was operated upon in a Chicago hospital, but following an attack of "*la grippe*" the trouble returned. The tumors were ligated, and recovery ensued promptly.

The two cases just mentioned represent the average conditions met with in hæmorrhoids, and afford also the opportunity of comparing the two most frequent methods of operating, viz.: the clamp and cautery, so urgently advocated by Kelsey of New York; and the ligature. It is true that both the conditions and circumstances of the patient and adaptability of the operator must govern the treatment in a majority of instances, and that what may be advisable at one time or under certain circumstances may not be suitable at another or under different circumstances. The clamp and cautery may seem more purely surgical than the ligature, and likewise more rapid, but, owing to the hæmorrhage that often follows, it is if anything more tedious and troublesome, and, when the clamp is removed, a seared, sickening and gaping wound is usually disclosed, presenting a nesting-place for microbes; the method itself is also bungling. On the contrary, after cutting through the derma and putting in place the ligature, there is no possibility of hæmorrhage, and the aseptic treatment of the stump allows rapid and

usually painless dry sloughing of the tumor and healing of the surface; ligatures may also be applied so closely that not even small tabs remain. Of the two methods, after due consideration, preference is given to the ligature.

Case 11.—G. F——, aged 39, suffered from stricture for fourteen years. December 10th last, had "*la grippe;*" a few days later the testicles began to swell and he experienced great difficulty in urinating. Later the urethra completely closed, and perineum, scrotum and penis became infiltrated. He was brought to hospital January 1st, when an external perineal and an internal urethrotomy were done. There was some sloughing of the infiltrated tissues, after which the wound healed by granulation. After four weeks he was allowed to go home, when he came under the care of the family physician. April 10th, the perineal opening having failed to entirely close, he returned, when flaps of skin were cut on both sides, one being first denuded and then turned over and dovetailed under its fellow. The skin was then coapted with silk sutures and the entire opening thus closed; a catheter was allowed to remain in the urethra. His temperature remained normal. A small slough came from the flap, but, as it promised to close by granulation, the patient was allowed to return home April 20th.

Case 12.—J. B——, aged 23, for several months had been troubled with very frequent and painful micturition, and pain in back and legs. On February 10th, a No. 30 (French) sound was easily passed, but slight strictures were found one inch and two and a half inches from the meatus. An internal urethrotomy was performed to admit a No. 34 sound. The patient went home February 13th.

Case 13.—W. J——, aged 34; emissions every other night, and an urethral discharge that had persisted for eight years. One and one-half years ago he was operated upon for varicocele, and the right testicle removed. No history of gonorrhœa or syphilis, but one brother had died of consumption. Examination of the urethra revealed a stricture at the meatus, which was cut February 21st, and a No. 30 sound passed every other day. The discharge gradually ceased, as did also the emissions, and he was discharged March 3d.

Case 14.—W. K——, aged 26; a history of several attacks of gonorrhœa, and also a gleety discharge persisting for seven years; for three years urination had been frequent and difficult. Following an internal urethrotomy, made March 14th, the discharge at first increased and the patient had chordee. Alkalies were given, and the urethra was directed to be washed with boracic-acid solution after each urination. Improvement followed shortly and the patient was discharged.

Case 15.—T. A——, aged 30, contracted gonorrhœa two years since, and was cured, he says, in five weeks. Five months ago he began to be troubled with frequent micturition, small irregular stream, and burning pain which soon became constant. At the time of admission he had to urinate every five minutes. His urine was acid, had a specific gravity of 1.022, and contained both blood and pus. During his first week the bladder was washed out twice daily, without benefit. A searcher revealed a roughened condition of the internal surface of the bladder, and with a view to remedying this a suprapubic cystotomy was made January 17th. A more thorough examination revealed a hypertrophied and contracted condition of the muscular layer of the viscus, which could not hold more than two ounces of fluid. Drainage was provided, and the bladder again irrigated twice daily with boracic-acid solution, but the patient gradually became worse. The wound did not heal, and pus continued to flow with the urine

Case 16.—D. C——, a laborer, aged 45 years, entered January 31st. For three years urination had been slow, painful, and difficult. It was possible to pass only a very small bougie. By manipulation externally the urethra at the posterior spongy portion was found to be imbedded in a very indurated and tumefied mass, that gave the sensation of being cartilaginous. So very unusual a form of stricture was evidently not amenable to anything but an external perineal urethrotomy, which was performed February 5th. A portion of the growing mass that was removed, on microscopical examination was found to be carcinomatous in nature, and accordingly on February 27th the entire growth and involved portion of urethra were excised and the proximal end of the latter sutured to the skin of the perineum. The wound healed rapidly, and the patient was in excellent condition at the time of his discharge, April 14th.

Case 17.—J. M——, aged 24, entered February 3d with an eight months' history of swollen and painful testicle that proved to be tubercular. February 5th it was removed, but a small stitch abscess unfortunately delayed healing. On March 17th he was discharged well.

Case 18.—L. W. H——, aged 63, suffered burning and scalding on micturition for twenty years. During the last two, urination had become more frequent and considerable mucus was passed; for the last two months the desire to urinate had been constant, and there was pain in legs and penis along with a feeling of weight in the pelvis; a hypertrophied condition of the prostate for a long time had rendered a catheter necessary. The searcher revealed a stone, which was crushed and evacuated February 5th, and the bladder washed with boracic-acid solution. He went home February 10th, but a few days later his old sufferings recurred in greater intensity, necessitating a return. April 10th median lithotomy was performed and another soft encysted stone removed; a catheter was left *in situ*. The external wound had healed sufficiently by May 9th to allow the patient to return home, able to urinate with ease and comfort.

Case 19.—B. O——, aged 48, on January 25th bruised his right elbow, which two days later became swollen and painful. An abscess and sinus having formed, he entered hospital February 2d, when the abscess-cavity was thoroughly curetted and packed with iodoform gauze. Suppuration continued for two weeks in spite of careful dressings, but the wound by March 7th (at which time the patient was discharged) had nearly healed.

Case 20.—Mr. W——, aged 29, on January 7th was struck upon the right arm and shoulder by a falling tree. The accident was followed by great swelling, and four weeks later a dislocation of the humerus was recognized and unsuccessful attempts at reduction made. On admission, February 9th, he was submitted to the action of cold applications for twelve hours; was then anæsthetized, the adhesions broken up, and satisfactory reduction accomplished. The arm was firmly bound to the side, and two days later a plaster splint was applied, with which he went home.

Case 21.—W. G——, aged 42, fell backward February 24th, severely bruising right shoulder and back. No bones were broken, but the shoulder became very much swollen. Rest in bed and chloroform liniment sufficed to cause all distressing symptoms to subside.

Case 22.—D. D——, aged 34, had had double hip disease when a boy, and consequently was badly deformed. August 10th, 1893, he fell and injured his right hand and wrist, which afterward became swollen and very painful. March 6th he entered hospital, and the following day the wrist joint was opened on both sides and a strip of iodoform gauze drawn through. A ten-per-cent. solution of iodoform was injected daily, and antiseptic dressings applied. The swelling gradually subsided, the wound closed, and he was discharged April 25th. The joint was stiff but thoroughly comfortable.

Case 23.—J. A. G—— was brought to hospital as the result of a fall whereby were fractured the left patella, and the right femur at both its surgical neck and the middle of the shaft. Both legs were encased in plaster casts. that on the right extending up onto and around the body so as to render that hip immovable; extension was also applied. For eighteen years the patient had been subject to convulsive seizures under anger or the least excitement, and unfortunately had four during the first forty-five days, hence it was impossible to keep him quiet. After six weeks the casts were removed, when it was found the patella had united by fibrous union; but afterward some retraction took place. The fractured femur had united at the surgical neck, but a false joint had formed at its middle. A binders'-board splint was now applied and allowed to remain for six weeks; but the bone, failing to unite, on February 22d was cut down upon, and the fragments found to be separated by an interposed portion of muscle. The latter was pushed aside, the ends of the bone curetted, drilled, and drawn together with double silk suture, a drainage tube was left *in situ*, and the external wound closed. May 1st union had apparently taken place and the wound completely healed.

Case 24.—Mrs. K. M——, aged 65, sustained a burn of the fourth degree over the shoulder, breast, and thigh. She recovered from the shock, was treated with antiseptic dressing, and returned to her home March 28th.

Case 25.—A. C——, aged 23, four years ago had the right foot crushed between two cars. The second and third toes and corresponding metatarsals were removed, and later the first metatarsal was scraped and skin grafts placed. The wound finally closed, but six months later broke open again. He was admitted to hospital January 22d; the foot was dressed antiseptically for nearly a month, then laid open over the instep, and pieces of dead bone removed. The wound was packed with iodoform gauze, and gradually filled up, promising good results when last seen.

Case 26.—J. K——, apparently more than 70 years of age, slipped and fell January 22d,

sustaining an intracapsular fracture of the left thigh; was brought to hospital eight days later. As he objected to forcible extension, he was allowed to remain quietly in bed. Union took place, and April 1st the patient was able to sit up, and a few days later he was removed home.

Case 27.—Miss K. L——, aged 60, had an attack of rheumatism during the winter of 1892–3, but recovered sufficiently to do a little work. March 17th, 1893, she slipped and sustained an intracapsular fracture of the right thigh, and spent six or seven months at the University and five months at Harper hospitals. On entering St. Mary's, February 22d, the fracture appeared to be united, but the leg was weak and unable to support any weight. Massage was applied daily, and with a little aid and encouragement the patient was soon able to walk about the ward. A few weeks ago she pared a hard corn from the top of the fourth toe on the injured side, which became inflamed and very painful. While giving massage treatment March 10th the nurse knocked a scab from the toe, following which not only it but the entire limb up to the hip became greatly swollen, and the temperature rose to 104°. Appropriate remedies were given internally, zinc ointment applied to the toe, and the limb kept moist with lead-opium wash. Recovery followed in a couple of weeks. Two weeks later the same swollen condition returned, but subsided under similar treatment. May 10th the patient was still in bed with rheumatism.

Case 28.—J. C——, aged 35, with good family history, except twenty years ago his left leg became swollen and painful below the knee. The swelling was lanced five or six times and pus evacuated, with no further trouble until December, 1893, when he began again to have pain over tibia. A week later, on opening the swelling, no pus was found. February 6th he was brought to hospital, when the tibia was opened at the junction of the upper and middle thirds, and a large pus-cavity emptied, curetted, and packed with iodoform gauze. February 1st patient returned to his home.

Case 29.—H. S——, aged 35, had typhoid fever ten years ago, following which his left ankle became swollen and painful, and an abscess formed that continued suppurating until he entered hospital. February 14th the sinus was opened, the lower third of the tibia scraped, and the wound packed with iodoform gauze. Suppuration continuing, March 14th the wound was reopened, thoroughly curetted, and re-dressed as before. The patient's temperature then rose to 103°, and varied from 100° to 103° during the next four weeks. April 11th the ankle-joint was exposed, disclosing the necrosed condition of the tarsal bones and the lower end of the tibia. Amputation was found necessary, and was performed April 20th at the middle of the leg; following which the temperature immediately dropped to normal. May 9th the patient was in good condition, the wound having nearly healed.

Case 30.—E. R—— had good family history save that a sister suffered from hip-joint disease. Five years ago he suffered pain in his left thigh, and twelve months since the left knee and thigh began to swell. The middle of January last, an abscess presented on the outer aspect of the middle of the thigh, and discharged about six ounces of pus. February 28th the thigh was opened, the diseased bone curetted, etc. The wound healed rapidly, and the patient was discharged April 16th.

Case 31.—C. de M——, aged 33, had been treated in August, 1893, for phthisis, and went home somewhat benefited. Soon afterward the right knee became swollen and painful. February 20th he returned in great distress; was greatly emaciated; the lung difficulty more serious; the bladder affected; urination frequent and painful, passing both pus and blood. A plaster cast was applied to knee and left for six weeks, but without benefit. On account of the discomfort induced, it was considered best to discontinue active treatment. The patient is gradually failing.

Case 32.—W. S——, aged 4, had congenital deformity of the right foot, necessitating amputation of toes when only eleven weeks old. The wound healed kindly, but a fibro-sarcomatous growth appeared at the line of operation and increased until a second amputation became necessary; this was performed at the junction of the middle and lower thirds of the leg, March 7th. The wound healed rapidly, and the patient was discharged April 22d.

Case 33.—W. D——, aged 63, entered the hospital February 21st with simple fracture of the bones of the left ankle. A binder's-board splint was applied and allowed to remain for seven weeks, when, evidencing satisfactory recovery, the patient was discharged.

Case 34.—H. B——, aged 7, sustained a compound fracture of his right fibula, one and one-half inches from the inferior extremity. The wound was drained, closed so far as practicable with sutures, and dressed. The result was satisfactory.

ST. MARY'S HOSPITAL FREE DISPENSARY.

During the three months ending March 30th, the outdoor department furnished two hundred seventeen surgical cases, besides eight referred to this department by the Director in charge, but which on examination proved to be medical and are therefore omitted from this report:

Of syphilis there were 20 cases. One, a child, had inherited the disease and was brought for treatment of a rapidly increasing swelling of the glands of the left side of the neck. Three came for treatment of the disease in its first stage. The remainder had various manifestations of it in either the second or third stage. In one case only did the symptoms persist in spite of unintermitting attention.

Necrosis of metatarsal bone after injury, 1; ditto of tibia following amputation, 1; synovitis of elbow joint, 1; bursitis, 1; varicose veins, 2.—In the majority of these cases the disease had been neglected until ulcers formed; moreover, among this class of patients there are few who can afford even slight expense, therefore recourse was had to woolen or cotton bandages, which were very satisfactory to the patients. Lymphadenitis, chronic, of neck, 6; ditto of axilla, 3 — wherever this condition has become chronic, there is ordinarily nothing except excision which will produce a favorable alteration; neuralgia of forearm, 1; ditto of testicle, 1; verruca vulgaris, 2; verruca senilis, 1; clavus, 1; chilblains, 1; onychia, 1; carbuncle, 1; bunion, 3; epulis, 1; fibroma, 1; ditto of scalp, 1; incised wound of scalp, 1; lacerated wound of ear, 1; sprain of back, from all, 1; fracture of ribs, 2; contusions of various kinds, 11; burn of the second degree, 1; lacerated wound of forearm, 1; Colles' fracture, 2; fracture of radius at junction of upper and middle thirds ("greenstick"), 1; ditto of ulna at junction of upper and middle thirds ("greenstick," in a child of three years), 1; ditto of metacarpal bone of little finger, 1; sprain of wrist, 2; ditto of ankle, 1; ditto of knuckles, 1; ditto of fingers, 2; bullet wound of hand, 1; ditto of foot, 1; incised wound of finger, 2: punctured wound of finger, 2; parotitis, 2; tongue-tie, 3; cyst in mucous membrane of cheek, 1; ulcerative stomatitis, 2; inflammation of submaxillary gland, 2; papilloma of tongue, 1; bronchocele, 6.—It is noticeable in treating these cases that, while yet in their acute stage, they are frequently benefited by the administration of iodine internally and externally; however, chronic enlargements of any gland in the body are seldom influenced by any internal medication.

Caries of the spine, 1; scoliosis, 1; oxyuris vermicularis (in man 47 years old, who had for a considerable period complained of piles), 1; tumor of stomach, 1; ditto of liver, 1; mastitis, 1—woman with both breasts inflamed, one already suppurating, both nipples cracked and ulcerated, still nursing her six-weeks-old baby. The child was temporarily fed prepared milk, the breasts were cleansed, milked, dressed with antiseptic and emollient dressings, and in a few days the woman was able to nurse her child again.

Hernia, umbilical (male child two months old), 1; hernia, inguinal, right, 2—one case entered the hospital proper for operative treatment; hernia, inguinal, left, 1; ditto, double, 1; hæmorrhoids, internal and external, 1 each; ditto, both internal and external, 1; polypus of rectum, 2; prolapse of rectum, 1; stricture of rectum, 1; anal fissure, 1; pruritus ani, 1; stone in bladder, 1; albuminuria, 1; hydrocele, congenital, 1; ditto, acquired, 1; papillary growth on scrotum, 1; retention of urine, 1; hypertrophied prostate, 2; cystitis, from trauma, 2; ditto, tubercular, 1; ditto, following gonorrhœa, 7; stricture following gonorrhœa, 8; ditto, traumatic, 2; gonorrhœa, acute, 10; ditto, chronic, 19; spermatorrhœa, 2; incontinence of urine, 3; balanitis, 2; orchitis, acute, following an attack of parotitis, 1; ditto, chronic and suppurating, 1; phimosis, 1; paralysis of muscles of shoulder following excessive strain, 1; anchylosis of elbow-joint after injury, 2; ditto following abscess, 1; paralysis of extensors of humerus following fracture, 1; neuroma of forearm, 1; tubercular inflammation of wrist-joint, 1; web-fingers, 1—corrected by operation; paralysis of first three fingers of hand from traumatic division of extensor tendons, 1; septicæmia following wounds of fingers, 4; fatty tumor of gluteal region, 1—being pedunculated became ulcerated and painful—excised; abscess of hip, 1; chronic rheumatoid arthritis of knee, 1; tubercular inflammation of knee, 1; ditto of ankle, 2; ulcers of leg, 4; congenital talipes varus, 1—corrected by operation; congenital talipes equino-varus, 1 — corrected by operation; talipes valgus (woman aged 43), 1.

Detroit, Michigan.

NOT A BAD DEFINITION!

A London (England) daily explains the term "exploratory incision," as "quarrying into a patient on the chance of discovering some disease in an internal organ which is curable by its removal."

The Medical Age.

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Editorial.

SODIUM IODIDE.

There are several paradoxes in therapeutics. Witness, for instance, the general use of *sulphate* of quinine instead of the *muriate*, which latter is much more readily soluble, much more readily borne, and, further, contains more quinia alkaloid, than the former; *sulphate* of morphine, too, in the United States, generally has the preference over the *muriate* and *acetate*, which are almost universally employed abroad and also possess a greater proportion of alkaloid *per se*.

So, too, the potassium salts seem to have received recognition to the exclusion of the *sodium* salts, though, as every practitioner knows, the former are illy borne by the stomach, and in the case of potassium iodide it is almost impossible, except in some few rare instances, to administer sufficient to saturate the patient owing to the fact that the stomach refuses it long before the desired point of medication has been reached. Bromide of sodium is a much more effective salt, and contains more bromine, than bromide of potassium, yet the latter with all its nauseousness and acridity still retains first position in the medical mind. What patient is there that could bear twenty grains of potassium iodide at a dose, or sixty grains of the bromide salt? yet 120 grains of bromide of sodium may be readily administered, and even greater doses are readily borne; and the same is equally true of the iodic salt. There are several reasons why the iodide of sodium should in the main supersede the potassium salt in general practice. Chief among these are:

Sodium being a very common ingredient in the organism, the iodine as its basis is best suited for absorption; its taste is much more agreeable than that of the potassium salt; it is much less likely to occasion iodism; it is better borne, and consequently its doses can be almost daily increased—it thus becomes a most efficient remedy:

It frequently succeeds where the iodide of potassium fails:

It may be given daily in three equal doses (twenty grains of the salt to three ounces of water), increasing the strength of the solution every two or three days by from five to ten grains—patients have in this manner been able to take two and three drachms daily without the slightest inconvenience:

It is admirably adapted to all cases in which iodide of potassium is indicated:

It is positively the best substitute for mercury of which we are as yet possessed.

Doctor Gamberini* administered sodium iodide in one hundred sixteen cases of constitutional syphilis, the results attained being highly satisfactory; and it was remarked that the greatest amount of benefit was derived by those who had vainly undergone a protracted course of mercury. He notes, however, that, like other remedies of its class, it affords no immunity against relapses.

Again, Doctor Daveri† states that after administering iodide of sodium in nineteen cases of secondary syphilis of the bones and periosteum, he found the remedy even more beneficial than iodide of potassium, and much more agreeably received. Further, from the larger dose of the sodium salt which he was able to administer, treatment was very much abridged.

In lead poisoning, M. Rabuteau‡ regards it as far safer than iodide of potassium, and also more effectual.

In scrofula and scrofulous affections; in chronic hydrocephalus; in syphilitic affections of the skin, and like affections of the nervous system; in chronic and rheumatic gout; in painful neuralgic affections dependent upon an inflammatory state of the nerve-coverings; in sciatica and lumbago; in faceache of a rheumatic rather than neuralgic character; in hemiplegia; in chronic inflammation and enlargement of the liver; in chronic Bright's disease; in the advanced stages of pneumonia, pleurisy, and bronchitis;

*Corisp. Scient. di Roma, 1852.

†*Bulletin delle Scien. Med.*, vol. xix, p. 269.

‡*Practitioner*, July, 1868.

in certain forms of asthma; in chronic pericarditis; in hypertrophy of the heart and aneurysm of the aorta; in mercurial palsy, tremors, and ptyalism; in flatulent dyspepsia; in diphtheria; in a vast variety of skin and eye diseases; in lupus affecting the extremities —iodide of sodium proves far more efficacious than the potassium salt, and the results induced are in every degree much more satisfactory.

There is no remedy, perhaps, which is so effective in that form of dropsy which occurs after scarlet fever, or in *tabes mesenterica*, as sodium iodide pushed to its utmost limit. It is a drug that is deserving of more general notice, and moreover of very thorough and complete study, such as has never yet been given it. From time to time the potassium salt has received more or less attention, but to-day its greatest value and its best applications seem to have been almost entirely forgotten, since none of the modern works on therapeutics and materia medica give to the iodic salts that credit to which they are entitled.

DID YOU EVER NOTICE

That putty women expect to have porcelain children?

That discontent is a disease which change of climate cannot cure?

That marriage develops antagonisms as well as compliances, and needs common sense in an uncommon degree?

That nature effaces legality, and determines whether acquired kinships shall hold good in fact as they assume to do in law?

That the nostrum advertisement creates the symptoms which the nostrum cures?

That "practical" people are often the biggest fools?

That the philosophy of results can never be established until all the returns are in?—the relief of pain within three minutes is only the voice of the nearest precinct.

That doctors sometimes dispense because they can't write an intelligible prescription?

That the fee of the specialist is, alas, sometimes his most lasting memorial in the mind of his patient?

That the great riddle which most people are trying to solve is, how to dance without paying the piper?

That the "blows which patient merit of the unworthy takes" are serviceable when the recipient builds them into the fabric of his philosophy?

That there is no fool like an old fool, *because* practice makes perfect?

That though politics is always "turning the rascals out," the politician is never out of a job—that is to say, the supply of rascals to be turned out is always equal to the demand of the campaign thunder-manufacturer? If this is not perpetual motion, what is it?

That the velvet paw of the soliciting doctor resembles the tiger's in more ways than one?

That the philosophy of the nostrum-prescriber is: "Where no one knows, all have an equal right to guess." Considering its quality, isn't this professional wisdom rather high-priced?

That men are unique in their troubles, but profoundly alike in their genuine consolations? Life is more real than any of its forms.

That "love," "patriotism," "faith," and other words of deep significance, are often made to do duty for their exact opposites? This is as ghastly as the application of cosmetics to the dead.

That those who rail most vociferously at medicine are among the first to telephone for the doctor?

That the knowledge of pertinent facts will always confer advantage? The rest of the play is ingenuity and farce.

That the brunt of the greatest effort of nature toward sustaining the equilibrium of supply and demand is laid upon the babies; and, like Greek grammar, they exhibit more exceptions than examples of the rule?

That nature is frank, and hypocrites are her pathogenic micro-organisms? Their art is to be so small that the microscope of investigation cannot find them out—but pathology results, nevertheless.

That nature makes a desperate effort to remedy her blunders every time she brings a baby into the world? If the children did not inherit more of the virtue than the vice of their ancestry, the race would long ago have become extinct. Yet this is a coward's excuse for burdening the unborn with mortgages to disease and sin.

KEROSENE VAPOR AS AN ANÆSTHETIC.

Foreign scientific journals are commenting upon an accident which took place on board the oil-tank steamship "Kasbek" while on her voyage from Batoum (on the Black Sea) to London. It seems a leak was discovered in one of the tanks, so serious that it was imperative it should be immediately repaired; but this could not be done without great difficulty, and moreover the hold was found full of explosive vapor, rendering approach with artificial light impossible.

Subsequently a part of the difficulty was overcome by the aid of a mirror, which was made to reflect light into the hold, but the men could not remain long enough to execute the necessary repairs owing to the asphyxiating effect of accumulated gas. Ropes were then made fast around the bodies of the more adventurous of the crew, and when no longer able to work they were quickly hauled up. Some on reaching the deck appeared to be in a state of intoxication, while others were in a laughing or crying mood. The master of the steamship was himself lowered, and, though down but a very few minutes, when drawn up was in an unconscious condition, from which he did not recover for several hours.

Thus it appears that breathing the accumulated vapor of kerosene or coal oil produces an effect similar to that produced by nitrous oxide gas. It would seem as if experimentation in this field might be productive of valuable results.

THE CHLOROFORM COMMISSION AGAIN.

The Hyderabad conclave has been almost forgotten, yet the assertions promulgated by Surgeon-Major Lawrie and followers crop up anew every little while, usually in connection with fresh negative evidence.

The gist of the whole matter, however, may be set to right in a nut-shell. It must be remembered that pariah dogs are not human beings with organisms modified by long suffering, fear of the unknown, etc.; that experiments in the climate of India are no criterion as compared with practical results in Great Britain, Canada, or the United States; that positive experiments are of little value without their full quota of negatives; and finally, no thinking man, no one possessed of practical experience or even ordinary physiological common sense, will ever accept laboratory experiments as conclusive when they clash with clinical results. While there is no harm during chloroform anæsthesia in giving respiration due attention, it is the utmost folly—to use the words of Mr. Daily, the well known London anæsthetist—"to neglect the pulse, the pupil, and the color of the complexion."

Certainly when the results of experimental investigation are contradicted by clinical experience, the preference should ever be given to the latter.

VASO-MOTOR CORYZA.

An item is going the rounds of medical journals to the effect that syrup acid hydriodic, in teaspoonful doses, is "the most efficient medicinal treatment" for so-called "hay fever."

This is practically getting back to the old treatment so long and generally advocated in Great Britain, viz., to saturate the patient with iodides, the potassium and sodium salts having the preference.—Iodide of sodium is perhaps better borne by the stomach than any other preparation. Nevertheless, the sooner practitioners realize this malady is protean in its aspects, and that each case must be studied by and for itself, the more readily will relief be afforded. The great reason why vaso-motor coryza, whether in the form of "June" or "rose" cold, or "autumnal catarrh," is unamenable to medication is, that ætiology and pathology are utterly disregarded, the sole aim being, apparently, to find that impossible agent, a universal remedy. The curse of the profession to-day, even more than a quarter of a century agone, is the persistent attempt not to treat maladies *per se*, but their names.

EDITORIAL NOTES.

Hydrophobia Statistics Desired.—

Doctor Charles W. Dulles, of 4101 Walnut street, Philadelphia, desires to receive information regarding the occurrence of cases of so-called hydrophobia during the year 1894. He would like in all cases to learn:

The sex and age of the patient:

The kind of animal which is accredited with the inoculation, and its state of health; the provocation to bite (if any existed); the reasons why the animal was (if it was) deemed rabid:

The seat of the bite or other mode of inoculation:

The fact and method of cauterization (if any):

The time between the inoculation and the outbreak:

The symptoms of the outbreak and occurrence of mania or imitations of dog actions:

The remedies used, their doses, and their seeming effect:

The issue of cases, and when death occurred:

The investigations made to exclude the presence of disease other than so-called hydrophobia:

The findings on autopsy, if such was held.

Doctor Dulles will acknowledge in future publications all aid received in regard to this subject.

Death of Doctor Bevan Rake.—

The demise of this eminent leprologist is reported, having taken place August 24th at Port of Spain, Trinidad. Doctor Rake was Superintendent of the Government Leper Asylum in Trinidad, and his "Reports" of this admirable institution made him famous among medical men throughout the civilized world; he was undoubtedly the greatest medical authority upon leprosy and leprous maladies.

To the medical profession the loss of this eminent gentleman is immeasurable; he will moreover be keenly missed by a wide circle of friends. His personal qualities were such as to gain him the greatest popularity, and wherever he went, though notably quiet and unassuming in demeanor, his frank, straightforward manners won him the utmost respect and regard of all with whom he came in contact.

The Contagion of Lockjaw.—

The *Times and Register* gives space to the following:

While Frank Jacobs, a farmer residing near West Grove, Pennsylvania, was administering remedies to a hog which was suffering with lockjaw, the animal coughed saliva into his face. Since then Mr. Jacobs has been taken critically ill, and it is believed that tetanus has been transmitted to him from the saliva of the pig. His salivary glands have become swollen and stiff, and he is supposed to be in a dying condition.

Although this statement may be looked upon as highly improbable, it is a question if it does not contain a basis of truth. The editor of THE MEDICAL AGE is familiar with two instances of individuals dying from tetanus, both of whom, apparently, derived the disease from horses that were suffering with the same malady.

Smallpox Past and Present.—

It is declared that at one time this malady was so generally and constantly present as to be the cause of one-tenth of all the deaths on the globe; that it destroyed fifty millions of people in Europe in the eighteenth century, and three and a half millions in Mexico in the sixteenth; in 1707 more than three-eighths —almost one-half—of the entire population of Ireland succumbed thereto, and in 1734 seventy per cent. of the entire population of Greenland.

Macaulay says it was "always present," filling the graveyards with corpses and leaving its traces on nearly every face.

It is gross and culpable ignorance of the character of this terrible malady that permits the ravings of the anti-vaccinationists.

Chloral Alcoholate.—

One of the dangers of chloral hydrate which must be constantly borne in mind, is the possible presence of chloral alcoholate, which *per se* is highly poisonous. This latter may be readily detected by pouring one cubic centimeter of nitric acid of specific gravity of 1.38 over one gramme of the suspected drug. If pure, at ordinary temperature, or on warming, no yellow color or yellow fumes will be developed under ten minutes. If, however, such are made manifest by the test, the presence of alcoholate is certain. As low as one per cent. alcoholate may be thus detected.

Santoninoxine.—

Recently more extensive experiments have been made with this derivative of santonin, which seem to evidence its value in promoting the expulsion of lumbricoids; and while it is more efficacious than santonin it is less poisonous, albeit excreted through the kid-

neys in the form of santonin. It not only increases the movement of parasites, but induces increased peristalsis, which undoubtedly is a decided advantage. It is insoluble in water and organic acids, yet easily dissolved by oils and fats; it resists the action of gastric fluids.

New Cause of Death.—

The *Medical Press and Circular* is authority for the statement that at an inquest recently held in one of the counties of England the verdict returned was as follows:

Owing to decay one part of the heart had become detached and traveling up the main artery it had reached the head where it completely blocked the cerebral artery. No medical skill could have saved her life.

Doubtless this incomprehensible decision arose from evidence too technical in character, as given by some pedantic medical man.

A Possible Source of Diphtheria.—

Two young men suffering from diphtheria were found, apparently, to have contracted the malady from a horse suffering from the disease known to veterinarians as "strangles." The one first taken acted the part of hostler to the infected animal, and in turn seems to have infected his brother. Such in brief is the outline of a report made in *Public Health* by Doctor F. T. Bond, of Gloucestershire, England.

Tubercle Bacilli in Nasal Cavities of the Healthy.

In the *Bulletin de l'Académie de Médecine*, Doctor Strauss relates the frequent finding of tubercle bacilli in the nasal cavities of healthy individuals. Thus we have another evidence that these bacilli are misnamed, and that they are not necessarily an ætiological factor in tuberculosis. Further, cases of tuberculosis are frequently encountered that on post-mortem reveal no traces of bacilli.

What is This?—

The *National Medical Review* states that Doctor John S. Billings has been "appointed Deputy Surgeon in the Medical Department of the United States Army." This is a rank with which we are not at all familiar. Probably Deputy Surgeon-General is intended, and yet this office is not a recent one to Doctor Billings, who we believe has held the same for some years.

Items and News.

Modern Phrenology.—

The so-called science of phrenology has long since drifted into the shady by-ways that are haunted by quack professors and charlatans. Its professions and beliefs have never withstood the test of serious examination, and, so far as we know, the world still awaits a convincing demonstration of its fundamental laws. It appears, however, that a British Phrenological Association is in a state of active existence. Quite lately the President of that society, Doctor Renner, delivered an inaugural address, in which he attempted to associate modern physiological advances with the principles first laid down by Gall and Spurzheim. He gave a review of recent cerebral discoveries, such as the localization of nerve centres and the development of automatic and other functional action. In conclusion, he declared that the scientific phrenologist stood on a basis of natural law, and not on one of mere speculation.

With regard to the last assertion we can only say that phrenology has had plenty of time in which to prove its principles, for it has been before the public for at least a century. The report which we have quoted does not say whether Doctor Renner attempted to explain why "bumps" over the motor area have had a significance attached to them by the phrenologists widely different from the motor functions ascribed to them by Ferrier and others. Or why, again, the numerous important centres at or about the base of the brain should have no corresponding external expression. The learned Secretary is reported to have counseled a closer study of the original views of Spurzheim and Gall, whose views were in strict harmony with all that medical science had of late brought to light. If the Secretary can prove his proposition he should lose no time in doing so, for he would at once elevate his hobby to the more honorable position of a serious scientific study. During the course of the evening a member made the pertinent remark that there was a science of phrenology as well as an "art" of character-reading. One may perhaps assume that the "professor" who dwells in an atmosphere of sawdust and stale tobacco devotes his time and energies exclusively to the "art"—the practical money-winning art—of phrenological exposition, and leaves science to the *savans* of his sect.—*Medical Press and Circular*.

Marriage and Venereal Disease.—

The medical profession is quite familiar with the discussions that have appeared rela-

tive to the infectiousness of old cases of gonorrhœa and to the injury done to innocent wives by marriage with such sufferers. The view at the present day is, that uncured gonorrhœas are the cause of many cases of chronic pelvic troubles, endometritis, salpingitis, etc. Instances in which men who have had syphilis have communicated the disease to their wives and children are painfully familiar in every physician's practice.

These very unpleasant but extremely important facts have been utilized lately by a lady novelist in a book entitled "The Heavenly Twins," which teaches that men who have led worldly lives are extremely liable to have been infected with venereal disease at some time in their pre-marital career, hence ought not to marry. Furthermore, young ladies should be made acquainted with the habits and the code of morals of young men, and should not allow themselves to fall in love with characters who are dangerous physically even if they are reformed morally. No amount of mutual love will last if the husband proves to be specifically infected, or if the wife develops the ailments associated with chronic disease of the uterus and appendages. The sterility of the male as a result of venereal infection, and the consequent inability to gratify the maternal instinct, is an argument upon which the limitations of polite fiction probably made it impossible to dilate.

Gold Mines in Cemeteries.—

A writer in *Le Temps*, of Paris, has been traveling in America, and, of course, relates his "impressions." What struck him particularly was not the Falls of Niagara, the inquisitiveness of reporters, or the consumption of pie, but the fillings in American teeth. He has consulted statisticians and finds that the amount of gold annually pounded into American dental cavities reaches the respectable figure of 800 kilogrammes, representing a value of half a million dollars. All this precious metal is buried with the Yankees when they die, and consequently at the end of three short centuries the cemeteries of the United States will contain gold to the value of $150,000,000. He thinks this will prove too tempting to the practical mind of the future American, and foresees the day when companies will be organized to mine the cemeteries and recover the gold secreted in the jaws of deceased ancestors.—*Medical Record.*

Castration vs. Hanging.—

The subject of castration as a punishment for crime, first presented more as a joke, is now receiving real serious consideration. There is no doubt that an immense proportion of the crimes committed against the State would not be committed if the perpetrators were castrated. It would thus be a preventive measure of much value.

Farmers castrate a horse to make him quiet and docile. He is no less a good worker and a useful animal, but much more tractable and manageable. It would be an excellent service to the State and nation to demand that tramps and vagrants be put to work or castrated, having their choice in the matter. As a punishment for major crimes it would work well in many cases, but would have necessarily to pass through a stage of experimentation in order to prove the after criminal capabilities or inclinations of the individual.—*Chicago Medical Times.*

Want No Physiology.—

The Christian Scientists of Burlington, Iowa, have petitioned the school board to excuse their children from attendance when physiology is taught. The petition declares that there is no material body, and objects to having children taught to believe there is anything so much in evidence as a stomach or a liver. It objects also to geography on the score that it recognizes a material body. The petition was refused, as the school board was too painfully conscious of its own stomach, liver, and other of the fabulous imaginary organs of the myth and delusion called the human body, to be able to coincide with the views of the petitioners.—*Times and Register.*

Pregnancy at the Age of Fifty-nine.—

In the *Gazette de Gynécologie*, Doctor Depasse reports an aged-looking lady with white hair, supposed to be suffering from a large uterine fibroid, whom a careful examination proved to be pregnant. She was confined of a boy at the full term, and was able to nurse him; she weaned her son on her sixtieth birthday. She was a widow and had a married daughter aged forty. The age was verified by a certificate of birth. Such late pregnancies are extremely rare.

The Oldest University in the World.—

According to the *Revue Scientifique* the oldest university in the world is that of Fez, the holy city of Morocco. This seat of learning was founded in the eleventh century by Fatima the Holy. In its early days—while as yet Paris, Oxford and Cambridge were not—the University of Fez had French, Spanish, and English, as well as Tunisian and Egyptian, students on its benches. At the present day it is the Western centre of Mussulman theology.

Favorite Beverages.—

In England these are tea, beer, and light wines, which are gradually taking the place of coffee, spirits, and heavy wine. The consumption of sherry and port in Great Britain has decreased in the last seventeen years from 11,000,000 gallons per year to 4,700,000, probably because good wines of this class are extremely rare. At the same time tea shows an increase of consumption during the same period of 6,000,000 pounds, and light wines of nearly 2,000,000 gallons.

"Scientific" Follies.—

Our scientific (?) friends are poisoning germs, microbes, and bacteria, and think it the proper thing to do, if they do kill their patients. As "bleeding" was one of the most stupendous follies and "scientific" blunders of its time, so will the "germ theory" of disease, and the destruction of micro-organisms in the living body, in the not very far future prove to have been the most gigantic follies of so-called "scientific medicine."—*Medical Free Press.*

Leprosy and Measles.—

Doctor Impey, of Robbin Island, in the *South African Medical Journal*, expresses the belief that leprosy will be cured, not by internal remedies or by external application, but by the introduction into the system of some bacillus inimical to the growth of the leprosy germ. This bacillus, he thinks, is to be found in measles.

Restriction on the Sale of Patent Medicines.—

A bill has been introduced in the Iowa Legislature, providing that every patent medicine offered for sale in that State shall have a printed statement on the wrapper giving the ingredients of the preparation. The penalty for disobedience to this law is a fine not exceeding $100, or imprisonment for six months.

A Centenarian at Law.—

The Circuit Court recently in session at Howell, Michigan, had a sensation in the shape of a centenarian witness, who, in spite of his hundred and one years, was as bright and keen as a man of thirty. In his testimony he declared he had buried five wives and would have another if he was not so lame.

Tri-State Medical Society.—

This organization, embracing the States of Georgia, Alabama, and Tennessee, will hold its next session October 9th, 10th, and 11th, at the Kimball House, Atlanta, Ga.

Book Reviews.

ILLUSTRATED DICTIONARY OF MEDICINE. By George M. Gould, A.M., M.D. Cloth, leather back; 8vo; pp. 1633. Price, $10.00. P. Blakiston, Son & Co., Philadelphia.

The unprecedented success of Doctor Gould's smaller volume led to the preparation of this more elaborate work, which presents the greatest amount of lexicographic and cyclopædic knowledge possible within the limits of a single volume, and so arranged as to furnish accurate, useful and concise information at the least expense of time and trouble. It contains many thousands of new words and definitions collected from numberless books and periodicals issued during the past decade—a decade unparalleled for scientific activity,—including the old as well as new spelling of certain words as recommended by the American Association for the Advancement of Science and other scientific bodies.

Of notable value is the incorporation of biological, zoölogical, botanical and chemical titles, these sciences being closely allied to medicine. Moreover, there is no other volume extant which deals with these terms with sufficient completeness to be of value to the general or medical student.

Pronunciation is given by the simplest and most easily understood phonetic method, so that "he who runs may read."

Illustrations are profusely employed—not for purposes of ornamentation, but only as necessary to the elucidation of the text; a large number of these have been made from specially prepared drawings.

Of particular value is the method of presenting series of facts by means of tables, such as of Surgical Operations, Tumors, Animal Parasites, Composition of Electrical Batteries, Pigments, Muscles, Bones, Nerves, Arteries, etc., etc., with illustrations so arranged as to invite comparison, furnishing a maximum of information in a minimum of space—this is a peculiarity which alone renders this volume vastly superior to any other medical dictionary hitherto published.

In spite of the fact that he may already possess one or more medical lexicons, no advanced student or earnest practitioner can afford to do without a copy of Gould upon his desk.

TRANSACTIONS MICHIGAN STATE MEDICAL SOCIETY, 1894. Edited by Charles W. Hitchcock, M.D. Cloth; 8vo; pp. 589. Published by the Society, Detroit.

This is the eighteenth volume of the Transactions of the State Society of Michigan

since its reorganization in 1866. With pleasure we note the fact that the publications are no longer in pamphlet form, but in solid board covers. The present volume is especially interesting. Among the most notable papers are a series devoted to tuberculosis, one to gynæcology, and another to abdominal and intestinal surgery; also there are two papers on syphilis, one on epithelioma and lupus, one on digitalis, one on inebriety, one on myxœdema, one on laryngotomy, one each on prostatic and urethral surgery, one on craniotomy, another on symphysiotomy, and finally a paper devoted solely to limitations of surgery in the neuroses, etc. There are the usual reports of the committees, secretary, treasurer, etc. As a whole the volume is most creditable to the State Society, and especially to the publication committee as exhibiting unusual taste and elegance.

THE ECLECTIC PRACTICE IN DISEASES OF CHILDREN. By John M. Scudder. Sheep; 8vo; pp. 486. Price, $5.00. John M. Scudder's Sons, Cincinnati.

The title fully explains the scope of this volume. The author claims a desire to establish a better system of medicine, and that the present work fulfills a mission in rendering the treatment of diseases of childhood more certain and pleasant. His descriptions are succinct and explicit, stating what he himself believes to be true, avoiding theories. The treatment advocated for the different maladies differs greatly from that of standard works of the day, or even the teaching of schools, but nevertheless in many instances is worthy of careful attention and study. One notable feature is that the remedies recommended are for the most part palatable, and moreover advocated in small doses frequently repeated—a mode of practice in which we heartily concur.

ORTHOPÆDIC SURGERY. By James K. Young, M.D. Cloth; 8vo; pp. 446. Price, $4.00. Lea Brothers & Co., Philadelphia.

The author has provided the practitioner and student with a guide in orthopædic surgery which presents the most approved knowledge of the present day. Though based largely on personal experience, the volume owes not a little to the existing literature of the subject, old as well as knew. Systematic treatises on general and special surgery, monographs and periodical literature have been faithfully consulted for material at once valuable and available for a work of the present scope and purpose. Much attention has been devoted to the mechanical part of the subject, and to pathology, all of which is thoroughly modern. The same may be said of the treatment advocated, which is of course the *raison d'être* of the work. The 285 illustrations add materially to the value of the volume.

TEXT-BOOK OF PRACTICAL THERAPEUTICS. By Hobart A. Hare, M.D. Cloth; 8vo; pp. 740. Price, $3.75. Lea Brothers & Co., Philadelphia.

This is the fourth edition duly revised and enlarged; and the demand for so many editions in less than the same number of years evidences that the work has found favor with students and practitioners. The reason for its popularity is doubtless to be found in the author's original and ingenious mode of conveying practical knowledge. Possessing a complete acquaintance with drugs and their remedial virtues, and having abundant clinical opportunities, he has made of this volume a treatise in which the properties of the materia medica are closely linked with their therapeutical application.

Moreover, the work is richly supplied with tables of value, and closes with a therapeutical index which places its practical contents immediately at the command of the reader.

SECRET NOSTRUMS AND SYSTEMS OF MEDICINE. By Charles W. Oleson, M.D. Cloth; 16mo; pp. 241. Price, $1.00. Published by Oleson & Co., Chicago.

The success of this volume is evidenced by the fact that it is in its fifth edition. The work is quite complete, and its object is the collection of formulas of secret remedies and methods and their preservation in convenient form for reference.

In these days when the craze after nostrums has reached proportions far exceeding anything previously known in the world's history, it is certainly very convenient to have a book like this at hand, not only for personal information but also to satisfy patients of the character of preparations which they too often assume are of great value.

TRACTS ON HOMŒOPATHY. By —— Sharp. 12mo; cloth; pp. 232. Price, 75 cents. Boericke & Tafel, Philadelphia.

This is a series of tracts expounding the homœopathic idea. The first is devoted to "What is Homœopathy?" then follow others devoted to the "Defense," "The Truth," "The Small Dose," "The Difficulties," "The Advantages," "The Principles," "The Controversy," "The Remedy," "The Proving,"

"The Simple Medicine," and "The Common Sense of Homœopathy." The work is a very interesting one as presenting in full the arguments in defense of the homœopathic profession.

THE DISAPPEARANCE OF MR. DERWENT. By Thomas Cobb. Paper; 16mo; pp. 263. Price, 50 cents. F. Tennyson Neely, Chicago.

This is a work of unusual interest. The plot is novel, and the climax very carefully concealed up to the last moment. It deals with a mysterious disappearance, the most prominent character being an educated physiologist who accidentally commits murder; there is also a mysterious household due to the mother of the hero being a victim of leprosy. From beginning to end there is not a dull line, and the work is one that will be of particular interest to the medical profession.

BEAUTIFUL FORMS AND FACES. Carl Nemethy & Co., Chicago.

This is a reproduction of some of the most notable works of art exhibited at the World's Fair. For those who enjoy the semi-nude in art it will prove particularly pleasing. We must say, however, that we think the value of the little book is not at all enhanced by the printing in different colors. Some of the illustrations are in sepia, some in blue, and some in plain black and white, and these last are much more attractive than the former; blue especially seems to be an unfortunate color in this respect.

THE GOSPEL OF BUDDHA. By Doctor Paul Carus.

The Open Court Publishing Co., of Chicago, announce the speedy issuance of this new work, which is a simple exposition in the words of the original gospels of the life and doctrine of Gautama Buddha, as they bear upon the religious thought of the present. This volume has already received the approval of several orthodox Buddhistic churchmen, and is to be translated at once into Japanese by the enthusiastic head of the Zen sect. We bespeak for it general sale among all who are interested in the evolution of religious thought.

FIVE HUNDRED PLACES TO SELL MANUSCRIPTS. By James Knapp Reeve. Boards; 12mo; pp. 50. Price, $1.00. The Chronicle Press, Franklin, Ohio.

This is a manual designed for the guidance of writers in disposing of their works. The difficulty with all printed lists of periodicals that pay contributors is, that they get out of date soon after being published, and hence are apt to become more and more misleading; nevertheless this is complete to date and a handy work of reference, one moreover that will be of value to medical men who seek remuneration for their literary labors.

THE PUPPIES; THE FATHER AND MOTHER OF THE PUPPIES.

These are two elegant chromo-lithographs, about 10 by 14, published by J. M. Grosvenor & Co., the well known dealers in plasters and surgical appliances, of Boston, Mass. The first represents a row of Irish setter puppies; the second, the two parents. Both are works of art, and well worthy of framing to anyone who is a lover of canine flesh.

For 30 cents J. M. Grosvenor & Co. will send a sample plaster along with one of these elegant chromos.

TENTH BIENNIAL REPORT OF THE STATE BOARD OF FISH COMMISSIONERS. Paper; 8vo; pp. 228. The Michigan Fish Commission.

This is a report from October 1st, 1890, to December 1st, 1892, and contains much material of value to those interested in fish culture; it especially deals with the development of wall-eyed pike.

THE PLANTS OF LAKE SAINT CLAIR. By A. J. Pieters. Paper; 8vo; pp. 12. The Michigan Fish Commission.

This is the result of biological examination of Lake Saint Clair undertaken for the State Board of Fish Commissioners in the summer of 1893. It is Bulletin No. 2 of the Commission.

THE NATATORIA OF THE GREAT LAKES. By H. S. Jennings. Paper; 8vo; pp. 34. The Michigan Fish Commission.

This is Bulletin No 3 of the Michigan Fish Commission, and is the result of biological examinations of the Great Lakes and of some of the inland lakes of Michigan.

DEVELOPMENT OF THE WALL-EYED PIKE. Paper; 8vo; pp. 66. The Michigan Fish Commission.

This is Bulletin No. 1 of the Commission, and a very complete study of *Stizostedium vitrium*. It possesses much of especial interest not only to ichthyologists, but to all biologists.

Therapeutic Brevities.

Digitalis in Pneumonia.—Petresco, in *Bulletin de Thérapeutique*, speaks most enthusiastically of the value of large doses of Digitalis in the treatment of pneumonia. He administers from four to eight grammes daily in the form of an infusion, with two hundred grammes of water and forty of syrup, a tablespoonful being given every half-hour. He has thus treated seven hundred fifty-five cases, with a mortality rate of 1.22 per cent. The temperature usually falls after such doses from 40°–41° to 36°–35° C., and the pulse from 120–130 to 37–30 or even lower, in one case sinking to 24.

Fickl, in *Wiener Medicinische Wochenschrift*, is hardly less enthusiastic after an experience with 108 patients, of whom seventy-four had croupous and thirty-four lobular pneumonia; one only, a case of frank lobar pneumonia, died. He quotes Hoepfel and Bärnau as having treated fifteen cases, with one death. He uses a somewhat smaller dose than Petresco, and gives alcoholic stimulants freely.

Strizover, in *British Medical Journal*, reports nine consecutive cases treated by the same method.

These remarkable results have not, however, passed unchallenged. Löwenthal (*Centralblatt für die Gesammte Therapie*) reports twelve cases in the Vienna Hospital, all of whom recovered; but the depression and exhaustion under treatment rather increased than diminished, while stupor and other cerebral symptoms were not influenced. The turgidity of the face disappeared and was replaced by pallor with cold extremities, while the cough and sputum remained as before. No alteration in the course of the disease could be detected by physical examination, previously intact lobes in two cases being affected after the patients were thoroughly under the influence of the drug. The course of the fever was but slightly influenced, but after the temperature fell it remained subnormal for several days. Before the crisis, the frequency of the pulse was only slightly affected; but after it, it fell decidedly, and often became very irregular, and remained so for two or three weeks. The blood-pressure also remained below normal. In three cases the slow pulse was followed by a rapid one, which was thready, irregular, and intermittent. Resolution was not prolonged, but, owing to the weakness of the patient, expectoration was less easy. Convalescence seemed lengthened, the picture being that of a marked and rather prolonged collapse.

Renier's (*Wiener Medicinische Wochenschrift*, 1893, h. 39) experience in twenty-four cases is very similar to that of Löwenthal.—*Boston Medical and Surgical Journal.*

Chronic Gastritis and Anæmia.—Recently Doctor Hildebrand called attention to the causal relationship which appears to exist between the presence of pharyngo-nasal affections attended by an exaggerated secretion of fœtid and irritating mucus, which is constantly being swallowed by the patient, and certain forms of gastric disturbance and anæmia.—It is not by any means the first time that attention has been directed to the point, but it deserves to be mentioned, as the existence of this causal relationship is usually ignored in practice.

He has collected one hundred recent observations of chronic post-nasal catarrh, accompanied by chronic gastritis with or without dilatation of the stomach, and anæmia secondary to the gastric affection—a form that in girls is apt to assume the appearance of chlorosis or pseudo-chlorosis. The gastric and constitutional troubles are most marked in ozæna.

Treatment consists in use of the nasal douche, the chronic gastritis meantime being combated by administration of creosote, and the gastric dilatation by lavage and massage. The use of the nasal douche is always followed by lasting improvement of digestive functions, even though it only exert a palliative action on the rhino-pharyngeal affection. Under this treatment patients are also enabled to take iron and arsenic, which before were not tolerated.—*Therapeutische Monatshefte.*

Cocillana in Respiratory Diseases.—I have used this drug in a number of cases of subacute bronchitis and in the persistent coughs following an attack of influenza, pneumonia, and measles. The therapeutical action is similar to that of chekan upon the respiratory apparatus, but its effects are more satisfactory in the subacute conditions than when the case is chronic. Upon the respiratory apparatus it acts similarly to fluid extract jaborandi when given in ten- or fifteen-drop doses, and like fluid extract gelsemium when given in smaller doses.

I have been well pleased with its action in spasmodic affections of the air-passages, such as asthma, hay-fever, etc., and consider it an excellent remedy in the declining stage of pneumonia.—It seems to accelerate resolution and certainly relieves the lingering

cough. When given in moderately large doses—twenty to thirty drops—it seems to act directly or specifically upon the broncho-pulmonary mucous membranes.

While there is usually a reduction of the temperature, I do not class this remedy with antipyretics.

Without going into a detailed account of clinical cases, I will say that the effects and results have been very similar in all cases of pulmonary affections, and with my experience I heartily indorse the drug as one of the best acquisitions to our materia medica.—*Chicago Medical Times.*

Lactophenin in Enteric Fever.—Doctor von Jaksch has tried Lactophenin in eighteen cases of typhoid fever, and finds the results very encouraging. Some of these were severe, with great prostration, hypostatic pneumonia, or other complications. The drug may be administered in one-half to one-grain doses in capsules, up to six grains per day if necessary, according to its antipyretic and sedative effect. No unpleasant symptoms were produced, save on two occasions the pulse was felt to be somewhat irregular while the drug was being administered. It lowers temperature, and the subsequent reactionary rise was unaccompanied by shivering—except in one instance out of about three hundred and sixty miscellaneous cases in which the drug was given. The great advantage of Lactophenin in typhoid fever is its sedative action; delirium vanishes, the mind becomes clear, and patients experience a pleasant subjective feeling, such as is given by no previous method of treatment; appetite quickly appeared in all cases. Whether the drug really cuts short the course of the disease, must be left to be decided by further observations. No protection against hæmorrhage or relapses can be expected from this drug any more than from other methods of treatment.—*Centralblatt für Innere Medicin.*

The Dangers of Thyroid Extract.—Doctor W. D. James, in the *British Journal of Dermatology*, reports a case of glycosuria caused by Thyroid extract given for the relief of psoriasis. The patient was a medical man, had taken the extract in small doses for some time without effect upon the disease, and then increased the dose quite suddenly. At the end of a week he began to suffer severely from depression, with frequent flushings and palpitations; the nervous symptoms increased, and the patient felt and looked a very old man. Before another week elapsed his thirst became unquenchable; the quantity of urine greatly increased; the breathing became embarrassed; the pulse rose to 132 per minute; and the smell of acetone was detected in the breath. The urine had a specific gravity of 1.032, and sugar was freely found by all tests. The Thyroid treatment was at once stopped, and anti-diabetic diet adopted, with the result that the quantity of sugar decreased daily, and disappeared entirely in a few days. No improvement was noted in the psoriasis.—*Medical Record.*

Passiflora Incarnata.—Being a neurotic, this drug has a wide range of action; it seems to exert an influence upon the sympathetic nervous system, and is employed to relieve nerve irritation, to diminish over-action, and to lessen motor activity. In tetanus, puerperal convulsions, spasms of children, and muscular contraction of women from any cause, its action is truly marvellous, —in puerperal convulsions I know of no remedy which acts so speedily and so charmingly. Likewise in insomnia from over-work or over-indulgence in alcohol it is valuable in producing normal, quiet, refreshing sleep, from which the patient may be easily aroused, though if allowed will soon fall asleep again. I have also employed with good results in congestive headaches, and again in cases of anti-peristalsis due to obstruction of the bowels. Have used in delirium tremens with happy results. Also found it beneficial in dysmenorrhœa. It acts well in dysentery, relieving pain and tenesmus; also in the restlessness of fever. It is moreover recommended for epilepsy and the morphine habit. It has no toxic effect, does not depress the system, therefore is not a narcotic, but it is the most certain and efficient antispasmodic known.—Doctor Oscar Enri, in *Southern Journal of Homœopathy.*

Normal Liquid Ergot in Night Sweats.—The best drugs for the prevention of the profuse night sweats of phthisical patients are, according to Doctor Pouchard, sulphate of atropine, white agaric, and phosphate of lime. But there are cases in which the perspiration is so abundant that waste of tissue and debility ensue, and all remedies have hitherto seemed powerless. It is in these obstinate cases that Ergot often proves of great value. Ten to fifteen minims of Normal Liquid should be given at bedtime, or better still, half an hour before the sweat commences, and if necessary the dose may be repeated in two hours. The treatment should be persevered in for three consecutive nights, and

the perspiration will be checked after the first or second day, the good results often continuing for one or two weeks. A subcutaneous injection may be substituted, if preferred, in one-third to one-half the dose.—*Journal de Médecine.*

Arrest of Lactation by Cocaine.—Painful fissures of the nipple are frequently treated by Cocaine, either in the form of an ointment or a liniment, but it has been found that when thus employed the secretion of milk is diminished and the erection of the nipple prevented. These objections led Doctor Joire, of Lille, to use Cocaine with the direct object of checking the secretion of milk when necessary, and accordingly he recommends a five-per-cent. solution in water and glycerin (equal parts), used as a lotion to the nipple five or six times daily. He explains the arrest of secretion by the anæsthesia of the nipple which results.—*Lancet* (London).

Pichi.—This is comparatively a new remedy with which I have been experimenting. It is indicated in all affections of the *urinary* organs, and I have found it especially useful in catarrhal troubles of the bladder and urethra.

I have used with decided satisfaction in several cases of gonorrhœa where the injections had been forced so far back as to carry the disease into the bladder, thus causing painful and frequent micturition. Pichi is a useful tonic to a weak bladder or where mucous membranes require tonicity. In irritable conditions of the bladder and urethra of pregnant women it will be found a useful and satisfactory remedy.—*Medical Times.*

Management of Quinsy and Tonsillitis.—Doctor Abram Lively, in the *Medical Summary*, claims a wonderful effect in aborting tonsillitis and quinsy by the following gargle employed freely and often:

℞ Ammoniated tinct. guaiac, } each 3 drachms.
Liquor potassæ, }
Tincture of opium, 2 drachms.
Cinnamon-water, sufficient to make 8 ounces.

At the same time are administered alternately every hour until bed-time, tincture of aconite leaves and tincture of belladonna; then ammoniated tincture of guaiac is administered alone every three hours in small teaspoonful doses.

Therapeutics of Salix Nigra.—The "pussy willow" has long enjoyed a reputation as an antiseptic and stimulant, and has also been used in the Southern States as a sedative in ovarian pain and in dysmenorrhœa; and in our own experience the fluid extract in one-drachm doses is very efficient as a uterine sedative. It has likewise been employed with good effect by Mr. Fenwick in the treatment of gonorrhœa, and by others for nocturnal emissions, so that it may be regarded as an efficient sexual sedative.—*Provincial Medical Journal.*

Perchloride of Iron in Soft Chancre.—Struck by the brilliant results obtained by Winckel in the treatment of puerperal ulcers by perchloride of Iron, Doctor Retzel has applied it in cases of soft chancre. Mopping with perchloride of Iron daily for four days produces a surface in which healthy granulations alone appear. The pain produced is rarely severe enough to render a preliminary application of cocaine necessary.—*Journal des Maladies Cutanées et Syphilitiques.*

Diarrhœa Relieved by Circumcision.—Doctor Douglas Mitchell, of Fort Worth, Texas, reports a case of infantile diarrhœa persisting for three months, and which latterly was supposed to be due to tuberculosis of the bowels, speedily relieved by removal of an elongated prepuce and breaking up of adhesion to the glans corona. He adds: "I believe one-third of the cases of bowel trouble met with in summer time are of purely reflex origin."

Hydrastis Canadensis in Throat Troubles.—The local application of fluid extract Golden seal in chronic pharyngitis with enlarged tonsils quickly relieves and causes a diminution of the redness and swelling. The subjective complications rapidly subside, and the patients easily accustom themselves to the bitter taste of the drug.—*Provincial Medical Journal.*

Oleander as a Cardiac Tonic.—Doctor Osfell reports that the dried flowers of *Nerium Oleander*, in three-grain doses, or ten to twenty drops of a ten-per-cent. tincture, two or three times a day, exert a powerful influence on the heart, similar to digitalis. Its diuretic action is very marked, and it stimulates the peristaltic action of the intestines.—*American Doctor.*

Alcoholism, Epilepsy, and Nitro-Glycerin.—Doctor Spencer Cox says that Glonoin is useful in removing the craving for drink in alcoholic patients, and that one drop of a one-per-cent. solution, injected hypodermatically, will immediately check a fit of true epilepsy

Medical Progress.

SOME THERAPEUTIC OMISSIONS IN TEXT-BOOKS ON DISEASES OF THE SKIN.—When text-books in special departments of medicine reach the bulk of nearly a thousand pages, the members of a laborious profession begin to protest and cry aloud! Even those who have a strong literary appetite and digestion feel frightened. Conscience tells them that they ought to know everything, and this is becoming every year more impossible. But there are many men who have time to read only a very little, and that little ought to be gathered into a brief and practical form.

Now, concerning organs and structures which lie on the outside of the body, there are few things which bring more credit to the general practitioner, especially in small country towns, than the right diagnosis and prompt treatment of the commoner diseases of the skin. The total neglect of clinical teaching in these matters was a reproach to our medical schools up to about thirty years ago. The danger is now that there may be too much *teaching* and too little *learned*. But teachers and learners will be in better temper with each other if there be a mutual understanding about the knowledge which is necessary and the knowledge which is only ornamental.

At the end of a little book written by the late Doctor Hughes Bennett, more than forty years ago, there are twelve pages devoted to the "Classification and Diagnosis of Cutaneous Diseases." Twelve pages! But this tiny breviary was of great use to many practitioners who were "qualified" in a legal sense, but had never received an hour's instruction about certain common maladies which are more ugly than dangerous. The subject was handled on firmer and broader lines in the "Principles and Practice of Medicine," a third edition of which was published by Doctor Bennet in 1859. For thirteen or fourteen years afterwards diseases of the skin were regarded in this country mainly as a final chapter in "Systems of Surgery" and "Systems of Medicine." The encyclopædic style and size of the new literary form of cutaneous diseases dates from about twenty years ago.

There are two great merits in all our important hand-books. One is that the pathological histology of diseases of the skin is plainly described and sometimes admirably illustrated. The other merit of these books is that they always contain a sufficient description of the rarer lesions, which occur to a medical man only once or twice in his life and are therefore apt to be forgotten or misunderstood. But, on the other hand, why may not these curiosities be relegated to the modest seclusion of small print and quiet chapters? This seclusion would be a relief to the eye and a harbor of refuge for the mind. Things of minor importance would no longer distract the attention. Adequate thought and time might then be bestowed upon those fundamental points of pathology and treatment, ignorance of which disentitles a man forever from being a cutaneous therapeutist.

It is not to be denied that there are serious hindrances to a rational therapeusis of the skin. A number of reputed remedies are purely empirical and rest upon no obvious logical basis. Trustworthy medicines, external and internal, are too often set aside for new things of doubtful origin and lineage. Foreign experience is allowed a disproportionate weight in determining the lines of English practice. A parade of authorities looks erudite; but, as a matter of fact, the application of foreign rules and methods has to be guarded by many limitations. Thus, we are dryly assured by one English writer that few patients will submit to a plan (specially described) which is not only tedious but increases the disfigurement for the time being.—Then what is the necessity for discussing the plan? We are indebted to Hebra and Kaposi for philosophic grasp of view, but their remedies are often greatly unsuited to the delicate skin of the Anglo-Saxon race,—Unna's pharmacopœia is more in touch. An odd point of the Vienna treatment is that sometimes the strongest form of a medicine is tried first, and this is gradually softened down to the mildest. I will be lenient here, and say nothing about the repulsive ill-smelling things which have their chief haunt and home on the Continent.

An encyclopædic author should learn to communicate his knowledge in the form which most quickly engages the attention. All experts are encyclopædists within their own range, but not all their knowledge is equally valuable. The formula of a catechism (much loved by Jonathan Hutchinson) assumes, perhaps, that the reader is always a student; in four cases out of five he seeks learning only for the sake of curing someone, and not for the learning's sake itself. Imagine, now, that the expert desires to teach us how to treat a common and rather polymorphic disease, psoriasis. He should trace in firm and clear outlines the method of treatment which he has found most prompt and (in the long run) most successful. Emphasis should be laid on the method best adapted for the ordinary forms of psoriasis as seen on the outside of the limbs and on

the homologous surfaces of elbow and knee. But what is to be done with two kindred types of disease which are fairly common, but (unfortunately) far less tractable: The dark, circumscribed, almost non-scaly patches which affect chiefly the lower parts of the back, and; the soft patches which are like eczema in appearance and situation and mode of spreading? Here are something like three distinct diseases, requiring three distinct therapeutic attitudes. One rigid formula of "psoriasis" cannot cover the whole therapeutic ground.

The external application of tar was recommended in all the older text-books as supreme for the common *psoriasis diffusa* of the outer surface of the limbs. Now here is a remedy which is splendid if used properly, and a poison if used wrongly. The good traditions of tar are still upheld, but there is a singular lack of instruction as to the right mode of preparing it. The *unguentum picis liquidæ* irritates and inflames, even when largely diluted with lanolin or vaselin. Nor are matters any better if the tar ointment be mixed with benzoated lard, spermaceti, or any similar thing. The suitable diluent of tar—the one chemical medium which neutralizes all its evil and augments all its power for good—is an alkaline earth-like chalk. The chalk must not be merely rubbed down with the tar by the rough mechanism of a spatula, but a regular chalk ointment ought to be first made by strewing chalk into melted lard and then stirring the two until they are thick and cold; if a finely levigated chalk be used, a bland product is the result, which can be combined with *unguentum picis liquidæ* in any proportion that the case seems to demand.

Here, then, is the therapeutic secret of tar. The emollient qualities of chalk (to which bismuth may be added) are beneficial in allaying pruritus and in helping to arrest the neoplastic tendency of the scaly order of skin diseases. The percentage of tar ointment to chalk ointment may begin with one part in eight. After a bath at bedtime, the warm and moistened skin should be smeared with the ointment just described, and a vest put on over it. The objections to the smell of tar are conjectural and imaginary: a wholesome and antiseptic odor will not disgust rational patients, whose philosophic boast often is that they can "take anything."

The chrysophanic mull as an application to the hard mahogany patches of scaly disease on the back and outside of the lower limbs, is not mentioned in some of the best text-books. Here was once the despair of the dermatologist; but the doubtful panacea of sulphur-waters has been superseded by Unna's ingenuity. If my own experience be accepted as in any way a guide, it is strongly in favor of a remedy so simple and so clean.

The management of those patches of psoriasis which are like eczema in distribution and behavior, is an important chapter of practical therapeutics. The essential point to remember is that this clinical form is liable to spread suddenly and become an exfoliative dermatitis. The psoriasis is the germ of an exudation into lymph-spaces and connective tissue; and if a crop of satellites appear around the main patches, extending to the palms of the hands or the soles of the feet, the danger is great. At this stage of matters we discard all academic terminology, and look at the complaint as if it were a spreading erythema or even an erysipelas.

When such a case occurs among patients sent to the Royal Mineral Water Hospital at Bath, I suspend the use of waters, and order to bed. Rest of the whole system; an equalization of blood-pressure; an uniform temperature; and a rigidly moderate diet, with abstinence from alcohol—these are the elementary postulates. Externally I apply almost constantly one of two things: a combination of sweet almond oil and vaselin, or; a combination of oxide of zinc, calamine, sweet almond oil, and lime-water. Both are very soothing, and help to quiet the vasomotor storm.

There is only one internal medicine of the slightest utility, and that is tartrate of antimony. But all depends upon the vigor and perseverance of its administration. If prescribed in the penurious and timid doses recommended by some authors, it is simply powerless for good or harm. "Be not afraid of power" was the maxim of a medical philosopher who knew that the biggest engine can do the finest work, if properly handled. Give fifteen minims of antimonial wine (abundantly diluted) every two hours from 7 in the morning until 11 at night, and in a large proportion of cases there is not only no disturbance of gastric or intestinal function, but a quick arrest of the disease. Sometimes this dosage can be given every hour, and continued for half a day; very seldom is it that five doses during the day hours cannot be well borne, if the diet be limited and absolute repose in bed enjoined. And the result of this medication is often very striking. The raging tumult of skin-structures subsides; the margin of redness ceases to extend; and paleness is observed in the centre of the purple fire. Withdraw the antimony by degrees; for several weeks it should be taken at least twice a day as a decided vasomotor tonic. This is the standpoint from

which Doctor Billing and some of his contemporaries forty years ago regarded tartrate of antimony, after its so-called antiphlogistic influence has spent itself.

When exfoliative dermatitis (beginning as apparent psoriasis) has once become established over a large area of the body, it may be "tamed down" and kept quiet by rigorous hygienic care. But there it is, and for awhile it is like a smouldering prairie. Anything may stir the glowing embers. And now we may prescribe perchloride of iron, perhaps guided by the old romance of its "alterative" virtues—but this matters little. What we know for certain is, that this now little-used medicine modifies nutrition, so that textures are renewed in a more solid way and with more durable plastic force. Cod-liver oil (Lofoten) is always a valuable auxiliary.

A negative precept in medicine has to be repeated sometimes with unwonted vigor. It cannot be said too often that arsenic in any form or combination is a poison to exfoliative dermatitis, especially when any increasing patch of it is surrounded with "satellites" which go up into the hand and creep around the foot.

One more therapeutic oversight in textbooks of skin diseases ought to be mentioned: A swollen leg afflicted with eczema *rubrum* or *madidans* from knee to ankle – how ought it to be treated? Well, there are three ways in which it ought not to be treated, and these are as follows: No ointment must be applied; no dry powder should be dusted over it; and a gelatin varnish is the most intolerable of all.

More than thirty years ago I discovered that the ordinary black wash (*Lotio hydrargyri nigra* of the B. P.) is successful and curative in a remarkable degree. Dilute it with a twelfth part by measure of glycerin, and pour a small quantity into a soap-dish or saucer. Soak strips of linen rag in the lotion, taking up on each strip as much as possible of the black oxide of mercury. Lay them evenly upon the limb, each overlapping the next by about one-eighth of an inch. Cover the whole diseased surface this way, and retain the dressing in its place by a thin cheesecloth bandage. Everything must be renewed twice a day, and the strips of linen ought to be soaked before removal in warm water. Nothing can answer better than this simple plan; but (so far as I know) no dermatologist of repute describes and sanctions it, with the exception of Doctor Purdon of Belfast, and his testimony to its value has been again confirmed in a recent number of the *Dublin Journal of Medical Science*.

Passing over several points of less moment, I conclude with a short note npon the therapeutic effect of mineral waters. It is declared by a high authority that natural medicated waters are locally not more effective than equally long immersions at home. It is difficult to prove or to disprove a statement of this kind. But it may at least be claimed that at natural hot springs provision is made for bulk of water, for maintaining an even temperature during any length of time, and for "packing" the patient afterwards with suitable wrappings; these mechanical aids make the application of natural spring waters an easy task. In the medical literature of the eighteenth century there are many records of the successful treatment of "leprous eruptions" by thermal waters which are, in a chemical sense, hot alkaline lotions. No scientific physician considers these "lotions" to have any specific virtue; but the physical convenience and comfort which attend their administration confer on them a healing power, which need not be associated with mystery or empiricism.—Doctor John Kent Spender, in *Medical Press and Circular*.

Symptoms by which Consumption may be Recognized.—I may say that a person who is easily fatigued; who is run down in weight; who has a poor appetite; if he follows an injurious occupation, has used or is using alcohol to excess, or if alcohol has been used by his parents or grandparents, or if there is insanity or any other grave nervous disease in the family; if he has a long, narrow chest with limited air capacity; if he is between twenty and thirty years old; if he is the youngest member of a numerous family in which a trace of consumption exists, and especially if he looks like the parent who suffered or who died from the disease—the probability is great that he is either a consumptive or stands in danger of becoming one soon. The same may be true if exposed only to part of these influences.—Thomas J. Mays, in *Philadelphia Polyclinic*.

Blood Spots. — An American authority states that he has discovered a method for detecting blood stains that the microscope had failed to reveal. When the smallest drop of blood is mixed with fifteen grammes of distilled water, and one or two drops of tincture of guaiacum added, a cloudy precipitate of resin is yielded, and the solution becomes slightly colored. When there is further added to it a drop of ethereal solution of peroxide of hydrogen, a blue color appears, which becomes deeper and deeper on exposure to the air.—*Chemist and Druggist*.

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Original Articles.

YELLOW FEVER.*

BY DOCTOR JOAO VINCENTE TORRES HOMEM.

1. American Typhus, Siam-Disease, *Typhus icterodes*, is a disease endemic in many portions of Central and South America, which has appeared under the form of more or less extensive and fatal epidemics during the summer months, from 1850 to the present time.

It is now proved that yellow fever appeared for the first time in Brazil in 1686, causing great mortality in the province of Pernambuco. In the opinion of the Portuguese physician, Joao Ferreira da Rosa, who described this epidemic very minutely, the scourge was imported by a ship arriving from St. Thomas, which had a large quantity of rotten meat in its cargo. Since this remote epoch, it was not until 1849 that the terrible malady again visited Brazil, beginning its ravages in the province of Bahia in the month of October, and passing unrecognized by physicians during its first onslaught. From official documents it is ascertained that it was brought here by the brig *Brazil*, sailing from the port of New Orleans, where yellow fever was prevailing. It was on the 27th of December of that year that the first cases appeared in Rio de Janeiro: two coming from the American barque *Navarre* and received in the Mizericordia hospital, four found in the "Frank" public-house situated in the Rua da Mizericordia, and two brought by the steamship *Dom Pedro*—which, like the other vessel, had come from Bahia.

In January, February, and March, 1850, the epidemic increased greatly, spread throughout the city, made eighty, ninety and more victims a day in the last-named month, attacked over 9,600 persons, for the most part foreigners, sacrificed 4,160 lives, and began to decrease only from April on, ceasing entirely towards the end of May.

In 1851 a second epidemic appeared, which carried to the tomb 475 persons; in 1852 the number of deaths was 1,943; in 1853 it was 853. During five years only a few sporadic cases were observed, chiefly among foreign seamen recently arrived in harbor; but in 1859 another epidemic occurred which killed 500 people; another in 1860 which made 1,249 victims; in 1861 and 1862, 259 persons died. From this time on, up to 1873, some cases of this disease were observed during the summer, always severe in unacclimated foreigners, and always causing a certain number of deaths. In December 1872, and January, February and March of the following year, an extensive and deadly epidemic once more developed itself in Rio, showing many points of resemblance to that of 1850. In the first months of 1874 the people were again terrified by the appearance of a large number of cases, although the epidemic was very limited in its ravages.*

These different epidemics of yellow fever which have annually visited the city of Rio show many analogies, one to another, not only in regard to the course they pursued, but also to the symptoms presented by the disease.

II. The causes which concur to yellow fever's becoming endemic among us, and to its appearing almost every year under the epidemic form, are of two sorts: The topographical and climatic conditions of Rio de Janeiro: The little heed bestowed by us on everything relating to public hygiene.

* Translated by Surgeon George P. Bradley, U. S. N.

* In 1878–9, during the healthy or winter months (May–August), while the vessel to which I was attached was lying in port, the number of deaths from yellow fever reported in the newspapers averaged about one a day, limited to foreigners or Southern Brazilians. No epidemic was prevailing. —TRANSLATOR.

I am in perfect accord with Doctor Frederick Thomas in the opinion he maintains in his valuable monograph upon the conditions concurring to the development of the disease in any locality whatever. These conditions are:

That the locality should be tropical or near the tropics:

That it be on the sea or a large river:

That it be naturally damp and subject to abundant aqueous evaporation, especially during the night:

That it be marshy, or close to marshes:

That its soil contain large deposits of organic matter, animal and vegetable, upon which the rays of the sun produce putrid fermentation, especially in the hot season:

That there be gathered in it many unacclimated persons, living in confined, ill-ventilated and unhealthful places, as in certain compartments of a ship, for instance, with an elevated and variable temperature operating upon them.

Whoever is well acquainted with the city of Rio de Janeiro knows that it unites all these conditions detailed by the celebrated French physician. It is almost under the Tropic of Capricorn—it is situated within the limits of the torrid zone; its mean temperature is 74° F., with a maximum of from 80° to 96° F., and a minimum of 68° F.; it is to a great extent surrounded by the sea; its soil, extremely moist, is almost exclusively composed of clay and humus, and mixed with these chief elements is a great abundanee of organic matter; on every side it is encircled by extensive marshes; it receives annually a large number of foreigners who come from Europe, mainly from Portugal, destitute of means, forced, in order not to endure the rigors of poverty, to submit to hard and excessive labor which impoverishes their strength, and living under bad hygienic conditions; besides the extreme heat, especially at certain times of the year, its temperature is exceedingly variable, causing constant and rapid oscillations of the thermometer, sometimes even within the twenty-four hours. Nothing is lacking, then, for yellow fever to become endemic here, and for epidemics to recur at the hot season.

To these conditions, which were allotted by nature to the beautiful city of San Sebastian,* and which assuredly cannot be removed, others are added proceeding from the want of care with which questions of public health are treated among us by the lofty persons who rule us. The filthy state of our streets, squares, and beaches; the numerous centres of infection represented by the so-called *corticos*,† genuine dens, where the life and health of the poor are sacrificed to the sordid ambition of proprietors, where, in a narrow cell, without air or light, three, four and more persons are piled in, sleeping, eating, doing everything there, slowly drinking in, in an infected atmosphere, the poison that undermines their systems, and poisoning one another reciprocally; the freedom of many business houses to sell to the wretched working-people provisions spoiled, tainted, and injurious to health; the irregular and unsuitable manner in which the sewers of the *City Improvements* Company operate, scant of water, the indispensable element whereby they might be useful and not prejudicial to the public health; the repeated large and deep excavations continually made, especially during summer, in the most central and populous streets of the city—are so many more conditions which, united to the former, concur powerfully to our having every year a visit from this terrible scourge of hot countries, which is domiciled in Rio de Janeiro, driving foreigners away, hindering the colonization we need so much, and disturbing the proverbial healthfulness of our climate.

Previous to 1850 a very important fact was noted among us in the summer months, which had great influence on some of the bad conditions of our climate, modifying them favorably, and which, as I think, contributed much to our having no visit from "American typhus." In the hottest days, particularly in January and February, great thunder-storms appeared in the afternoon, accompanied by torrents of rain, the storm lasting three or four hours. The electric discharges increasing the amount of ozone in the air; the enormous condensation of aqueous vapor abound-

*This is the name proper of the chief city of Brazil, and not Rio de Janeiro, which is only the title of the bay or harbor; the latter term is, however, now accepted to include all the towns and cities on the bay.—ED.

†Literally, "hives."—TRANSLATOR.

ing in the atmosphere; the fall of great masses of water, washing the atmospheric strata, and lowering the temperature—such were the salutary modifications of our climatic conditions by these tempests, in which the medical constitution of those distant times shared. With the onward march of civilization, our virgin forests were destroyed to make way for beautiful carriage-roads and railway tracks; our suburbs little by little lost the rural aspect they possessed, the luxuriant vegetation that adorned them was destroyed for rich palaces to be built in their stead; new streets were opened in localities where the hand of industry and the arts had never passed. Whether it be due to this, or determined by other causes, the fact is that from year to year the thunder-storms and heavy showers kept on disappearing, and with them were extinguished as well their beneficial results. The influence of this cause on the appearance of yellow fever is so real, that the distinguished Brazilian physician, the Baron de Lavradio, referring to the climatic conditions which preceded the great epidemic of 1850, attaches great importance to the excessive drought which occurred at the end of 1849, the glowing heat of the summer of that year, the absolute lack of thunder-storms, the absence of the breezes which were wont to appear in the afternoon and cool the atmosphere, and the arrival of crowds of adventurers on their way to California.

At the time of the epidemic of 1850, heavy electric discharges were of much aid in lessening the intensity of the evil, not only diminishing the number of those attacked, but also rendering the cases less severe. The late Doctor Paulo Candido, who was then president of the Central Board of Public Health, and one of the most distinguished professors of the medical university of the city, after repeated ozonoscopic investigations arrived at the conclusion that the progress of the epidemic decreased in direct ratio to the amount of ozone existing in the atmosphere after heavy thunder-storms; his opinions on this subject are learnedly set forth in his report of 1851. The illustrious Figuier* maintains that the amount of ozone in the air is in inverse ratio to the degree of civilization and material progress of a city.

III. No one disputes that yellow fever is due to a miasm, which has its origin in a centre of infection more or less extensive and of variable fertility. As to the nature of this miasm, entire ignorance still prevails in science; epidemiologists disagree. I have always maintained that this miasm is mixed and complex; that to the composition of it concur, on one side, the malarial miasm, and on the other the typhous; that it consequently contains one element of vegetable origin, and another of animal; that to the union of these two elements, sometimes one predominating, sometimes the other, comes the influence of the sea to impart a certain modification, which gives it a special stamp, the result being the production of "yellow fever" or "American typhus." I am well aware that this opinion, like every other, does not dispense with an hypothesis; but this hypothesis has in its favor the powerful air lent it by the course of the morbid phenomena, the nature of the symptoms, and the recognized benefit of a certain number of therapeutic means.

I have more than once, on very grave occasions, denied any possible advantage in the discussion set up between contagionists and anti-contagionists relative to the contagion of a disease. This way of thinking of mine is chiefly applicable to yellow fever. Among those who have most and best observed epidemics of this affection, some affirm that it is contagious, others maintain the contrary. This difference of opinion exists also among Brazilian physicians. On the one side as on the other they appeal to facts, and facts lend themselves perfectly to confirm all, without the possibility of distrusting the good faith of the antagonists. In the interpretation of opposite facts there is almost always partiality on both sides; the discussion may be prolonged indefinitely, and neither convince the other. To me, yellow fever is not contagious; so I have thought from the time I began my medical career, and this opinion day by day acquires in my consciousness deeper and more unshakable roots. I respect the opinion of the contagionists; I am convinced that they defend rationally and

* *L'Annde Scientifique*, 1862.

courageously an idea which they believe to be humanitarian; but not a single fact of my observation nor a single circumstance of my practice authorizes me to think differently.

The venerable councillor Jobim is in the wrong when he angrily assails the anti-contagionists, denouncing them with all the penalties of the infernal regions; at the advanced age of so respected a man, in a mind so cultivated, such intolerance finds neither excuse nor explanation. When his excellency ascended the popular lecture-platform to convince everybody that yellow fever is contagious, and that in quarantines and sanitary cordons lies the salvation of the country, I listened to him with all attention, ready to follow him in case my convictions were shaken. But in spite of the greatest goodwill, in spite of the immense resources of the orator, I left the public-school building of Gloria in the same mind in which I had entered it.

I know well what the contagionists have to say of the importation of the disease, of its spreading beyond the centre in which it originated, of the observations of Dutrouleau, Pugnet, Pariset, Andouard, and Gerardin demonstrating contagion; I know well that my distinguished colleague the Baron de Lavradio has always thought and still thinks like these authoritative observers, and his opinion is very weighty, for he has very closely attended the course of the epidemics which have appeared in Rio de Janeiro; nothing of this is strange to me. The importation and spread of yellow fever among us is perfectly explained by the laws of infection; if this disease were contagious, the inhabitants of certain elevated and healthful localities would not have remained free from it when patients attacked by the epidemic came there. We may set aside authorities; for Miller, Dalmas, Valentin, Devéze, Thomas, Chauvin, Lefort, and Rochoux are anti-contagionists—think precisely as I do. Putting the question on this ground, the advantage is on my side, for of the epidemiologists whose opinions I am acquainted with and have consulted, six sustain contagion and seven sustain the opposite. But it is not by the weight of authority that should be argued, especially among us, a question that is only to be resolved by observation and experience. The two greatest epidemics of yellow fever that have appeared in Rio de Janeiro were those of 1850 and 1873. The former I know only by tradition, by the writings of physicians who observed it, particularly by the description of it by the Baron de Petropolis and the Baron de Lavradio.* The latter I observed in its origin, in its course, and in its termination; I attended it in all its phases, and on this occasion I studied once again the question of contagion. What occurred in this epidemic? Having begun in the part of the city nearest the shore, it was concentrated here a long time, causing great destruction, and attacking almost exclusively unacclimated foreigners. Little by little it went on extending through the heart of the city; afterwards it invaded the more distant points, and even reached the suburbs. An important fact, and one observed by everybody, was this: In proportion as the epidemic kept advancing, in proportion as it became generalized, in proportion as it became distant from the centre where it originated, it kept growing less fatal and less severe; the intensity with which the disease attacked people was in inverse ratio to the number of those attacked.

Another fact, also important and no less incontestable: In the course of the month of March, and even during the first fortnight of the month of April, while some grave cases were observed in various localities far distant from the centre of the city, and particularly near the beaches, the points first scourged became free from the malady. It seems beyond doubt that there was a focus of infection, whence the miasmata were detached to be scattered in the atmosphere; the more these miasmata were concentrated in a circumscribed zone, the more pernicious were their effects, and to the persons who exposed themselves to the maleficent influence of this poisoned zone was its action limited. During this first period of the epidemic, not a single case of yellow fever was observed beyond certain limits, unless the patient had been in some house or street comprised within the zone of which I speak. Some patients

* Relaçao dos doentes de febre amarilla tratados no hospicio de Nossa Senhora do Lioramento.—Historia e descripçao da febre amarilla epidemica, que grasson no Rio de Janeiro em 1850.

who at this time were transported to the suburbs did not transmit the disease.

In 1850, at the time of the first epidemic of yellow fever in Rio de Janeiro, and during the first three months of the year 1873, many well-to-do unacclimated foreigners withdrew to elevated places, like Tijuca, Petropolis, Therezopolis, and Nova Friburgo, in order to keep out of reach of the miasm generating the epidemic disease; to some of these places came several yellow-fever patients, others fell ill there, having carried the disease from the city; now, not only is it true that the epidemic did not develop there, but also that none of the inhabitants who remained there during some time sickened of yellow fever. What does this prove if not that "American typhus" is exclusively infectious, and not contagious?

There entered the Santa Izabel ward of the Mizericordia Hospital in 1873, 1874, and 1875, a large number of yellow-fever cases, many excessively grave, some of whom died; not a single one of the other patients in the same ward—some in an advanced stage of cachexia and very much reduced, others in the beginning of convalescence—contracted the disease. In the hospital of Nossa Senhora d'Ajuda, in 1873, I had under my charge 139 yellow-fever patients, and in 1875 over forty; many were in the same wards in which were other persons suffering from various acute and chronic affections; yellow fever did not manifest itself in any of these persons; all the cases of this disease treated in the establishment came from outside. If contagion could occur, where better could it than in the two hospitals, among people enfeebled by old ailments, very apt consequently to receive the miasm coming from the victims of the epidemic? Do not impoverishment of the animal system, the weakness peculiar to the state of convalescence, the bad moral conditions under which the dangerously ill always labor, constitute circumstances favorable to contagion? All epidemiologists are agreed upon this point.

All admit as a powerful predisposing cause for contracting yellow fever the fact of being a person recently arrived at the place in which an epidemic of this disease is prevailing; it is one more argument against the contagionists. In the epidemics we have had, it is not only the foreigners who come here who pay a heavy tribute to the epidemic disease; the Brazilians who inhabit the southern provinces, especially San Paulo, Rio Grande do Sul, Santa Catharina, and Minas Geraes, when they come to town are almost infallibly victims to the affection, particularly if they go to dwell in the heart of the city. Those who reside temporarily in these provinces, and after some time return to the centre of infection, are in the same case. The climatic conditions of the south of Brazil, very different from those existing in the capital of the country, especially from those of the city, and very analogous to those of some European countries, explain these facts satisfactorily.

In the epidemic of 1873, when the disease attacked acclimated citizens, children of two to ten years of age furnished the greater contingent to the mortality of those who were not foreigners or had not come from the south; in the month of February alone seventy-five children perished, of whom two were less than one year old, the others comprised within the periods I have just indicated.

Indigestion, abuse of unripe fruits, insulation, chill and over-work are the causes which with us ordinarily excite the appearance of yellow fever.

IV. Yellow fever presents in its natural course three distinct stages: The so-called stage of reaction, the congestive, inflammatory, irritative stage, in which the patient shows symptoms of high fever, of congestion and inflammation of various organs: The so-called period of remission, quinine-stage (Baron de Petropolis), in which these symptoms are entirely dissipated, or more or less diminished in intensity: Hæmorrhagic, ataxo-adynamic period, in which the disease becomes characteristic, where hæmorrhagic phenomena appear, among which black vomit and ataxo-adynamic symptoms predominate.

The disease with us rarely presents true prodromic symptoms; in the immense majority of cases it attacks a person suddenly, surprising him in the enjoyment of perfect health. Yet it cannot be denied that in certain exceptional cases prodromata appear which precede by from twenty-four to thirty-six hours the explosion of the disease; these prodromata consist of loss of appetite, weakness of

the legs, fatigue on the slightest exertion, unfitness for work, frequent gaping, disturbed sleep, and headache; at times, before evincing the symptoms characteristic of the first stage of yellow fever, the patient is attacked by one, two or more regular paroxysms of intermittent fever of quotidian type, with its three stages well marked.

Yellow fever does not always present three periods; sometimes the symptoms of the third period rapidly replace those of the first, without the least transition occurring; or the symptoms of the latter are mingled with those of the former, it being impossible to distinguish periods. As a general rule, the gravity of the disease is in an inverse ratio to the distinctness of the stages; in the gravest cases, the phenomena are precipitated in so disorderly a manner and so swiftly that in less than forty-eight hours the subject passes from the state of health to the condition of a corpse, as I have sometimes had occasion to observe.

After premonitory symptoms or without prodromata, yellow fever begins by a chill of variable duration and intensity, followed by very severe supra-orbital headache, which in some instances forces the patient to groan.

Intense fever succeeds, accompanied from the start by pain in the loins, in the lower limbs and at times in the upper. The face becomes flushed; the eyes are injected, weeping, and very sensitive to light; together with these phenomena noted in the face, especially in the eyes, there is in the patient's expression a certain languor, a certain evidence of prostration, of great value to him who is accustomed to see patients in the first stage of yellow fever. The integument of the trunk, above all on the chest, appears hyperæmic. The patient moves in bed with difficulty, not only on account of the weakness he feels, but chiefly because motion exacerbates the pains in his legs and loins. The tongue sometimes appears heavily coated, and in this case there is bilious vomiting; sometimes the furring is moderate, and then there is only nausea; sometimes the tongue shows no change except some redness at the tip and edges. There is epigastric pain, spontaneous or (as is the general rule) excited by pressure and percussion. Thirst is intense, and loss of appetite absolute. The liver is enlarged many fold; the spleen remains normal. There is constipation of the bowels; the opposite condition, that is diarrhœa, is so rare that I observed it only once in 112 patients. The urine becomes more scanty, as in all febrile reaction, redder and more concentrated, sometimes giving, sometimes not, an albuminous precipitate on the addition of a few drops of nitric acid or with heat. Occasionlly delirium or a tendency to coma is observed, but almost always the intellect remains perfect.

Not all these symptoms characterizing the first stage of yellow fever merit the same consideration: Some, which I shall term capital, are of great value; others, which I shall term secondary, are of very inconsiderable value. The former are: Supra-orbital headache; the aspect of the face, of the eyes, and of the skin of the chest; the pains of the loins and legs; albuminuria when it is present; and the course of the febrile temperature. I shall treat of these with some minuteness. Although the jaundiced color is very rare in the first stage of yellow fever, still in some cases it manifests itself very markedly over the whole surface of the skin. I shall analyze this symptom also, and discuss its mechanism.

The headache is almost always very intense, and is seated by preference in the supra-orbital regions, where, besides the pain, the patient experiences a sensation of great weight, which makes motion of his upper eyelids difficult. In some cases, less rare than is commonly thought, the cephalalgia extends to the other regions of the head and is attended by delirium or sopor. There is not the least doubt that the pain in the head, which is never wanting in the first period of the affection, and which torments the patient so much, recognizes as its pathogenic condition a hyperæmia of the meninges, more or less pronounced, the traces of which autopsy reveals to us with noteworthy frequency. This hyperæmia, when it is intense and extensive, is denoted by a certain number of cerebral phenomena, among which delirium and coma figure. In the cases observed in 1873 in the hospital of Nossa Senhora d'Ajuda, the symptoms dependent on the cerebro-meningeal congestion became so threatening that I did not hesitate to employ direct and vigorous treatment against them.

The first case was that of a young Portuguese, in the springtime of life, who had a turgid face and a furious delirium, which forced me to resort to the strait-jacket. Notwithstanding that this was an unequivocal case of yellow fever, I applied leeches to the mastoid processes and temples, and prescribed some remedies tending to combat the cerebral hyperæmia. The second case was that of an extremely robust Hollander, of athletic build, who was presented plunged in deep coma. Had it not been for the subjaundice apparent over the entire skin and sclerotics, I would have bled him with the lancet; however, I ordered a large number of leeches to be applied to the mastoid processes and occipital region. These two patients recovered in a short time.

In April, 1870, there entered the hospital a patient in the first stage of yellow fever, in a state of genuine carus, with swollen violet-colored face, yellowish sclerotics, urine heavily laden with albumen, and very high temperature. Guided by the pulse, which was full, hard, and very accelerated, I prescribed a bleeding from the arm of twelve ounces, and twenty-four leeches to the base of the skull; in spite of this antiphlogistic treatment the comatose condition did not decrease, and the patient died at 4 P.M. the same day. Autopsy revealed the existence of great hyperæmia of the vessels of the meninges, especially of the arachnoid, and of the white matter of the whole encephalon.

The injection and brilliancy of the eyes which attend the cephalalgia, and of which the intensity is in direct proportion to the latter symptom, depend likewise on intracranial congestion. But together with the redness of the ocular and palpebral conjunctivæ, is noted a slightly yellow color serving as a basis for this—a color resulting from the mixture of two, similar to that of divided ripe orange-peel; it is especially in the internal angle of the eyes that this color becomes more manifest. The intensity of the pain in the head, compelling the patient to keep his upper eyelids lowered, added to the breaking down of strength and great prostration which are very marked from the first day, give to the patient's expression an aspect of languor and suffering which, in conjunction with the color of the eyes and the injection of the face, sets on the person's countenance a special stamp of great value for diagnosis; it is the expression noted in the drunkard who is wavering between the stages of excitement and collapse of intoxication. In the period of invasion of eruptive fevers, particularly of smallpox, are noted the flush of face, the redness and weeping of the eyes; but we do not observe the special expression of yellow fever, which should not escape the attention of the physician.

In some cases, rare in Rio de Janeiro, the intensity of the headache, flushing of the face and injection of the eyes greatly diminish in consequence of an epistaxis that supervenes, a genuine action of fluxionary hæmorrhage, which gives the patient marked relief, and of which the pathogenic significance is very different from that referable to the same symptomatic hæmorrhage of the third stage. The blood flowing from the nasal fossæ is bright scarlet, plastic, easily coagulable.

The outer integument of the thorax also appears hyperæmic in the first stage of "American typhus;" putting the open hand on the anterior chest-wall, and making some pressure upon it, we note, as soon as this ceases, the imprint of the fingers marked by a pale color, in contrast with the redness of the rest of the part; this paleness is due to the withdrawal of blood from the compressed capillaries.

Some well known physicians, who have observed various epidemics of yellow fever, as Chauvin, Cormillac, and Rochoux, attach great diagnostic importance to the uniform and diffused redness of the thoracic wall.

This symptom is so frequent here that I have never yet failed to meet with it.

The lumbar pains constitute a very constant and significant phenomenon of the first stage; they sometimes assume the character of lumbago and are of moderate intensity; sometimes reveal themselves as a true rachialgia, having as a starting-point the spinous processes of the last vertebræ, radiating to both sides, and invading the upper part of the lower limbs. In these cases the lumbar pains are always attended by pains in the legs, cause great suffering to the patient, force him to cry out and groan and beg very earnestly for relief of his misery.

The time at which these pains appear, the

radiating character they present, and the means successful in removing them or lessening their intensity, show evidently that they are directly connected with hyperæmia of the spinal membranes. When this hyperæmia is limited to the dorso-lumbar region —which is the general rule—the pains are observed only from the waist down; but when it exceptionally invades the upper parts of the spinal axis, the patient complains also of pain of a neuralgic character in the upper limbs, as well as in the throat, nape of the neck, and chest; this I had occasion to observe in two patients at the hospital of Nossa Senhora d'Ajuda, in January and February, 1873. In one of them, who died later with all the symptoms of the third stage, a genuine hyperæsthesia was noted over the whole body; the man seemed attacked by a general dermalgia. Whoever will consult the old but precious volume by Valentin, where the yellow fever which appeared as an epidemic in Philadelphia is described by a master hand, will find there a record of contusing and neuralgic pains, scattered over various regions of the body, forming part of the symptomatic table of the first period of the disease.

When the violence of the lumbar pains demands special treatment, the means of most avail is the application of wet cups to the painful part; which is another proof that these pains depend upon intra-spinal congestion.

The presence of albumen in the urine, revealed by the addition of a few drops of nitric acid, or by the use of heat, constitutes a symptom of great diagnostic value when it appears in the first stage of yellow fever.

In the epidemic of yellow fever of 1850, according to the report of authors dealing with it, albuminuria manifested itself at the outset of the disease—was one of the early observed phenomena. When studying medicine in 1857 and 1858, I took occasion to consult the opinion of my learned master, the Baron de Petropolis, in regard to this: He attributed such importance to the presence of albumen in the urine of patients entering the ward with fever, that often, in presence of this symptom, without any other characteristics of yellow fever, his judgment inclined to a diagnosis of that affection, and he was almost never deceived; while he hesitated to assert the existence of yellow fever when albuminuria was wanting.

In 1869 there entered the Santa Izabel ward a Portuguese boy, recently arrived in Brazil, with high fever and in a comatose state. Examination of the urine showed the presence of albumen, and by this alone I diagnosed yellow fever; this diagnosis was confirmed later, for the patient, after he became free from coma, had black vomit and jaundice, dying with the hæmorrhagic form of the third stage of the disease. At this same time, when a little epidemic was prevailing here, I was called in consultation to see a lad of sixteen years of age, arrived a few days before from the province of Minas Generals, and who had sought employment in a business house on the Rua Direita. This young man had intense fever, which dated from three days back and was attended by constant delirium. Examining the urine with nitric acid, I obtained an abundant albuminous precipitate; this was enough, after hearing the previous history of the case, for me to declare to the attending physician and the patient's family that it was a very grave case of yellow fever. In fact, between seven and eight o'clock at night the febrile reaction lessened much in intensity, but black vomit appeared, evacuations of the same color, and profuse epistaxis; the following day, at 11 in the morning, the lad died, having vomited a matter resembling writing-ink up to the hour of death.

We see then that in the epidemics which appeared in Rio de Janeiro from 1850 to 1869, albuminuria was very frequent in the first stage of yellow fever; but the same did not happen in the great epidemic of 1873, or in the less extensive one of 1874. Out of eighty-two patients entering the hospital of Nossa Senhora d'Ajuda during the first, and twenty-two during the second, all with the symptoms of the first stage of the disease, albumen in the urine was found only fifteen times (fifteen per cent.); even in those cases where the scantiness of the urinary secretion and the deep color of excreted fluid led to the presumption that chemical reagents would give an albuminous precipitate, nothing was obtained, either by nitric acid or heat. The like observation was made by several colleagues whose attention was

drawn to this point. In the epidemic which invaded the city of Lisbon in 1857 the same occurred; in the first stage of the disease the urine was ordinarily acid, red, transparent or turbid, but destitute of albumen; in very few cases was the presence of this substance manifest to chemical analysis (Doctor Costa, Alvarenga). Some epidemiologists who have recorded the history of yellow fever in various foreign countries, such as Thomas, Cormillac, Pariset, and Gerardin, have had repeated occasion to observe the same fact.

While the yellowish color of the conjunctivæ, especially of that covering the sclerotic, is a very frequent symptom in the first stage, a yellow color of the entire cutaneous surface is rarely observed in this stage; it is later, in the second, and chiefly in the third stage, that it becomes constant and well manifested, serving thus to give the disease the name by which it is generally known.

It seems beyond doubt that the yellow color of the skin in the first stage does not depend on the coloring principles of the bile which produce common jaundice, but rather upon the elaborating process undergone by the blood in the capillary network of the derma, where hyperæmia occurs; the stasis of the blood favors the change of the red blood-globules, the hæmatin contained in these globules is decomposed and furnishes the yellow-red coloring matter which tinges the cutaneous surface. But to explain the intense saffron-yellowness of the third stage, we must in many cases have also recourse to the hepato-biliary system, where evident disorders are observed which account for the phenomenon; as I propose to demonstrate on a suitable occasion.

In the course of the epidemic of 1873, persuaded that the thermometer ought to lend great service in the diagnosis and prognosis of yellow fever, I initiated some practical studies of thermometry in the hospital of Nossa Senhora d'Ajuda, efficiently aided by the two hard-working students of the sixth year who then held the position of internes and are to-day my colleagues.* The college being in vacation, and I not attaching the least importance to any results which I could arrive at in the observation of patients in private practice, to whom it was often impossible to make two visits a day, I limited my observations to the hospital, into which many serious and important cases poured, and where the mortuary record showed a figure extremely flattering to this establishment. It was the *résumé* of these investigations which I presented to my pupils on the 1st of May, 1873, on the occasion of the second of a series of nine lectures which I gave on yellow fever, published the same year.*

The results at which I arrived were verified later, both in the clinical ward in 1874 and 1875, and in the hospital of Nossa Senhora d'Ajuda itself in January, February and March of the latter year, by a series of minute and thorough observations made by my interne, Doctor Martins Costa, some of which were published in his excellent inaugural thesis.†

The thermometric examinations were made in all three periods of the disease; but as I believe them to be of value only in the two first, and as in the third there was no constancy nor regularity in the observations, I offer here only the results obtained when there was frank febrile reaction, as also when the period of transition was manifest.

If the patient was observed in the first twenty-four hours of the affection, the temperature ordinarily exceeded 104°, yet in only two was it beyond 106°, reaching 107.4° in one; it was never lower than 103.6°, and the average was 105.2°. It is needless to say that I refer to cases where no medication had been employed which could disturb the thermic state of the system.

If the patient entered immediately after the manifestation of the first symptoms, or when prodromata scarcely existed—that is, when it was possible to gradually appreciate the upward progress of the temperature—it was clearly seen that in all cases the mercury rose rapidly and continuously until reaching its maximum, without morning or evening

* Doctors Caltano Ignacio da Silva and José Bernardo de Loyola.

* Liçoes de clinica sobre a febre amarilla, feitas na faculdade de medicina do Rio de Janeiro, pelo Doctor Joao Vincente Torres Homem, 1873, page 80.

† Do valor das investigaçoes thermometricas no diagnostico, prognostico e tratament das pyrexias que reinao no Rio de Janeiro. (These do Doctor Domingos de Almeida Martins Costa.)

remissions; the rise of temperature occurred precisely as in pneumonia. Having reached its maximum, the temperature stayed here for a variable space of time, according to the gravity of the disease, according to the duration of the first stage, according to the duration the second stage was to have, according to the more or less rapid course the whole disease was to have, and according to the nature of the symptoms which were to characterize the third stage.

If the illness was not very serious, especially if it was destined to abort under antipyretic remedies, the maximum temperature lasted at most from three to six hours; then the mercury fell a degree, two degrees even, and between two and three degrees in benign cases; it remained at this point during six to twelve hours; again it fell, and in this second fall it either reached suddenly 98.5° to 99.5°, which was a sign of favorable prognosis, or it came to 101.3° or 101.8° and stayed here one, two or more days, and then the appearance of the third stage was infallible. The more prolonged the time that the temperature was maintained at this figure, the graver were the hæmorrhagic or ataxo-adynamic symptoms.

When the first stage lasted more than forty-eight hours, and especially when it went beyond three days, which was almost always of bad omen, the maximum temperature remained stationary during twenty-four or thirty-six hours, and only after this time did the heat begin to fall, following a slow course in some cases (ordinarily when the hæmorrhagic symptoms were to predominate), a rapid course in others (when the ataxo-adynamic form was to characterize the third stage).

If the second stage was to be of brief duration, and then be followed by the third, the thermometer at times fell from 105° to 100.4° –99.7°; in the opposite case the fall took place slowly and gradually. In one case only, I observed the rapid descent of the temperature from 104.5° to 97.2°; the patient had profuse black vomit, consisting of pure, diffluent, decomposed blood, became algid, and died two hours after. In this case it seems to me beyond doubt that the sudden fall of temperature was due to hæmorrhage in the stomach.

The shorter the total duration of the disease was, the less long was the space of time during which the maximum temperature remained stationary. In a young man recently come from Rio Grande do Sul, in whom the disease ran through its three stages and terminated fatally in sixty-four hours, there having been no period of transition, or it passing unnoticed, the temperature of the first stage reached 106.6° in nine hours; it remained at this maximum barely seven hours; as soon as it began to decline, the first black vomit appeared, attended by profuse epistaxis.

As a general rule, if the symptoms of the third stage consisted exclusively of hæmorrhages, the malady terminating in cure, or ataxo-adynamic phenomena appearing only very near death, the temperature of the first stage maintained its maximum for twelve, eighteen, and even twenty-four hours; if, on the other hand, ataxia and adynamia were to predominate, hardly one or two blackish vomiti appearing, the space of time was very short during which the thermometer remained at the highest degree it had reached.

From what has been said, a series of conclusions of great importance in practice may be drawn:

The patient who, in an epidemic of yellow fever, presents a temperature above 104.2°, particularly if it has reached such a point rapidly, should be considered as affected with the prevailing disease:

If the maximum temperature, having barely lasted three to six hours, be followed by a rapid lowering of heat, without this being accompanied by any phenomenon of the third stage, the disease will very probably abort:

If the temperature of the first stage maintain itself at its maximum for more than eighteen hours, without modification under the use of the so-called antipyretic remedies, the appearance of the third stage will be very probable, and a very grave form of the disease may be expected:

If the fall of febrile heat of the first stage take place very rapidly, the thermometer indicating a temperature below 100.4°, the duration of the second stage will be short:

If the maximum temperature of the first stage remain stationary for more than twelve hours, the symptoms of the third stage will consist chiefly of hæmorrhages:

If the duration of the maximum of febrile heat be very short, the third stage will be characterized by ataxo-adynamic phenomena.

These conclusions are based upon the attentive observation of eighty-two patients in the first stage of yellow fever, who entered the hospital of Nossa Senhora d'Ajuda, the temperature being always taken, with the same thermometer for each patient, twice a day.

Doctor Faget, in a memoir published in 1875, presents some conclusions regarding the course of the temperature in yellow fever which are not in much accord with what I have observed in Rio de Janeiro; these conclusions of the illustrious French physician, based upon one hundred and three observations, thirty made in New Orleans, and seventy-three in Memphis, U. S., are brilliantly analyzed by Doctor Martins Costa in his thesis already more than once cited by me; in support of the opposite opinion he maintains, the young Brazilian physician presents some thermometric charts, carefully drawn according to the notes taken by him at the bedside in my wards of the hospital of Nossa Senhora d'Ajuda, when he performed the duties of interne with a devotion and skill above all praise.

One of my most distinguished pupils, Doctor Julio Mario da Serra Freire, now practicing in the capital of Maranhao, maintains in his inaugural thesis,* with proofs drawn from the observation of several facts, that yellow fever in Rio de Janeiro may assume the *rapid-continued*, *slow-continued*, and *broken* types. This opinion of our talented colleague has been accepted by all who occupy themselves with clinical thermometry here.

Among the secondary symptoms of the first stage of yellow fever, some are deserving of special attention. The depression of strength, although denied by some foreign physicians, has been frequently observed among us; as soon as cephalalgia and fever appear, the patient can hardly keep on foot, some have not the strength to sit up in bed, and they complain of deep physical prostration; but few can walk about, retaining some vigor, after the febrile reaction attacks them.

* Do valor dos investigaçoes thermometricas no diagnostico e prognostico dos molestias agudas febris (These Inaugural, 1872).

In a small number of cases a symptom is noted of which epidemiologists speak little—cramps in the lower limbs; in a young German, employed in a business house of the Rua San Pedro, this symptom appeared under so aggravated a form that it extorted groans and required the use of narcotic frictions. I saw a patient, recently come from San Paulo, the same year, in whom cramps opened the scene of the first period of the disease and lasted thirty-six hours.

Disturbance of intellect, assuming the shape of genuine delirium, is rarely observed in the first stage, and when the symptom is exceptionally present it is connected with intense headache, and redness of the face and eyes, as I have already had occasion to remark. Ordinarily patients appear calm, either wholly indifferent to their condition, or sad and apprehensive, overcome by fear of death.

The cases are very rare in which the tongue becomes dry at once in the first stage of yellow fever; it is sometimes covered with a thick white or yellowish coat of fur, sometimes red at the tip and edges, but almost always moist; in the epidemic of 1850, as in that of 1873, this is what the physicians of Rio de Janeiro observed.

In some patients—in the proportion of about a fifth of the cases—vomiting appears in the first stage; but this symptom almost always coincides with the presence of a well marked furred condition of the tongue, revealing, like that, pronounced gastric trouble, and furnishing a precious indication for the use of emetics.

Constipation of the bowels is an extremely common symptom in the first stage of yellow fever, and often accompanies the disease to its latest phases.

Congestion of the liver is seldom wanting, particularly twenty-four hours after the appearance of the initial symptoms; congestion of the spleen is so rare that I have never happened to meet with it.

V. The second stage of yellow fever, also denominated *stage of transition*, *intermediate*, or *quinine* stage, in the very significant phrase of the Baron de Petropolis, is characterized by complete cessation or great diminution of febrile reaction, headache, and pains in the loins and legs—this manifest improvement

coinciding, or not, with the appearance of some perspiration and profuse diuresis.

When this period occurs in a complete manner, the thermometer indicates 98.5° or 99°, and at times the mercury may fall below normal. Although the fall of temperature rarely takes place suddenly, yet in some cases this happens, and the fact is of great importance in treatment. The more marked the decrease of febrile heat, and the more rapidly this decrease occurs, the more urgent and imperative becomes the indication of preventive treatment of the third stage, and the more efficient the treatment in its results.

The only phenomena which at times persist in the second stage, even when the patient is evidently better, are injection of the eyes, face, and chest, and yellowness of the conjunctiva. There are cases where this yellowness becomes more intense, and is diffused over the whole skin, lasting throughout convalescence; there are also cases, exceptions to the general rule, in which albuminuria appears in the second stage, not having manifested itself in the first, and in no way affecting the favorable termination of the disease.

In this second stage of yellow fever the patient feels much better, experiences a certain sense of comfort which foretells to him a speedy cure; he even thinks himself cured. If the thermometer indicates complete apyrexia, the physician may nourish well founded hopes that the terrible symptoms of the third period will not come on, *provided he avails himself of the opportunity to forestall them by vigorous and suitable treatment.* If the doctor, sharing his patient's belief, considers him well or entering convalescence, and therefore fails to give remedies, he will often be cruelly deceived, and will behold a series of hæmorrhagic and ataxo-adynamic phenomena appear, of which the violence and gravity will be in direct proportion to the duration of the period of transition, and of the flattering condition characterizing this period. This is the bitter tribute paid here by some foreign physicians who for the first time witness a few cases of yellow fever.

In 1869 I was called in consultation to see a Frenchwoman, recently arrived at Rio de Janeiro and residing in the Rua de San José. I found her moribund, bathed in her own blood, and of a very intense jaundiced color. The physician who treated her was a foreigner who had little experience of the diseases of Brazil; after observing the first stage of the affection, which appeared to him to be a simple continued fever, he considered the patient convalescent when the febrile reaction completely ceased and with it the rest of the symptoms; he advised the use of seltzer water and nourishment. Two days after ceasing to visit the patient, he was summoned again to see her, as she then complained of great epigastric uneasiness, attended by oppression and dyspnœa, which did not permit her to sleep or to rest a moment in bed. Not recognizing the sinister significance of this symptom, finding some pain in the region of the stomach when he palpated and percussed, and learning that the patient had nausea and had vomited the seltzer water she had drank, the medical attendant thought it a case of gastric irritability, supervening in consequence of over-eating, and in conformity with this judgment ordered twelve leeches to be applied to the epigastrium. It was these leech-bites that had been converted into sources of blood which could not be stanched and remained open to the hour of her death.

Epistaxis, black vomit, dejections of the same color, and metrorrhagia, furnished yet another noteworthy contingent to the horrible condition in which I found the patient, who had also been seen a few minutes before by the distinguished professor of obstetrics of the university, Doctor Luiz da Cunha Feijo Filho.

A young Portuguese who was resident in Brazil over two years, was attacked by yellow fever in the Rua do Hospicio, where he was employed as clerk in a provision store. The first stage of the disease followed a very regular course, and lasted forty-eight hours; the second stage was so well characterized, the symptoms denoting it were so prominent, that the patient, supposing himself well, wished to get out of bed and eat according to his desires. The physician in charge, duly estimating the flattering conditions he observed, did not yield to the patient's request, but ordered him the preventive medicines of the third stage though convinced that it would not manifest itself. In spite of his repeated recommendations, this medication

was not carried out, and his counsel regarding diet was despised. Thirty-six hours after, bilious vomiting and restlessness appeared, the temperature rose again, the urine grew scanty, later on black vomit and ataxo-adynamic symptoms appeared, and the patient died eight hours after I saw him in consultation.

While it is true that the thermometer, consulted in the second stage, and revealing complete apyrexia, constitutes a very valuable means of exploration, since it authorizes us to employ boldly the preventive medication of the third stage, and to place all hope in it, it is no less true that the same precious instrument may be the cause of fatal error, contributing to the inexperienced physician's belief that his patient is out of danger, is about to become convalescent, and therefore no longer needs active remedies. It is for this reason that some epidemiologists give the second stage of yellow fever the name of *deceptive* stage, and I deem it very appropriate.

I attach great importance to the second stage, because it is on that I rest my hopes; it is by that I am usually guided in forming a judgment of the prognosis of the affection —when it is very distinctly manifest, the patient almost always recovers; it is, finally, in this stage that should be employed the therapeutic means which are to prevent the appearance of the terrible symptoms of the third period.

In many cases the second stage is incomplete; the fever lessens, but does not entirely cease; the thermometer indicates a temperature almost always above 100°, having in the evening some exacerbations, that is, increase of some tenths of a degree in febrile heat; the headache loses in great part its severity, but does not entirely disappear; the same happens with the pains in the loins and legs; the urine in these cases remains scanty and high-colored; the patient, although he feels better, often experiences a sense of muscular fatigue and weakness which hinders his movements or makes them inconvenient; he has some oppression, the seat of which he believes to be the stomach; he has insomnia, lack of appetite, and nausea.

As a general rule, the more incomplete the second stage, the more probable becomes the appearance of the third, the graver will be its symptoms, and the less efficacious the preventive treatment.

The thermometer in these cases is a safe guide to the physician's judgment. After employing the medicines destined to combat the phenomena of congestion and reaction which characterize the first stage, the practitioner should always consult the thermometer; if, after thirty-six hours, or at most two days, the mercurial column does not fall to about 98.5°—if it keeps above 100.4°, he ought to distrust the patient's condition, even though manifest improvement on the part of the other symptoms be present; he must expect that the third stage will not fail to appear—the gravity of this stage may be estimated by the degree of heat revealed by the thermometer, after the use of the so-called antithermic or antipyretic means.

Thus, then, even in the second stage of yellow fever, thermometrical exploration offers many advantages to the practicing physician.

There are four symptoms that may present themselves in the second stage, together or singly, or combined in pairs, which infallibly indicate the speedy appearance of the third stage. The first is the *persistence of fever*, of which I have just treated in detail; the second is *albuminuria*, which, not having shown itself in the first stage, becomes manifest in the second, and coincides with the permanence of the fever.—If the albuminuria which supervenes in the second stage exists without the least febrile reaction, it has not the slightest influence on the termination of the disease, as has been already stated; but when, the period of transition having arrived, abnormal heat is still noted, and albumen appears in the urine, this not only indicates the proximity of the third stage, but also that it will be very grave.

If, instead of albuminuria, *anuria* is observed, whether it was already existent in the first stage, or has supervened only in the second, we cannot count in any way on preventive treatment. As I shall show further on, in Rio de Janeiro anuria is the gravest symptom of yellow fever, and especially when its duration exceeds twenty-four hours.

There is one symptom peculiar to the second stage which always indicates extreme

danger, as well as the near approach of the third stage, and which may coincide with complete apyrexia, absence of pains in the loins and legs, and absence of albuminuria; namely, *epigastric uneasiness* (*anxiedade*). The patient experiences an undefinable sensation of anguish, oppression, and dyspnœa; he moves continually in bed, now to one side, now to the other; from time to time he takes a long and deep inspiration, a real sigh; it seems to him as if a heavy body compresses his stomach and hinders the movements of the chest-wall. This phenomenon, which has received the name of epigastric uneasiness, often precedes by only a few minutes the appearance of the first black vomit. Again, less marked, it lasts for some hours, and it is only later that are manifested the hæmorrhagic or ataxo-adynamic symptoms. However flattering may seem to be the person's condition, I consider him to be in imminent danger of death whenever I observe this symptom to which I have just referred. Among other patients, I saw in 1873 a young Belgian, twenty-five years of age, who, having had high fever and headache for two days, supposed himself much better at the time I visited him at the invitation of a brother in whose house he was. Everybody was convinced that the patient was about to become convalescent; his own brother told me that he called me in consultation merely to have his conscience clear, as the grave symptoms had disappeared; the attending physician thought the same way.

Taking the temperature with the thermometer, I found it 100°; there was no longer headache, the patient complaining merely of some heaviness of the head; the urine was scanty, but gave no albuminous precipitate; he had appetite and slight thirst. Together with this apparently benign array of symptoms, I observed the terrible phenomenon of epigastric uneasiness: the young man moved constantly in bed, like one who feels the want of air; his respiration was sighing; and, trying to explain his sensations, he said to me, "*Je me sens l'estomac trop plein;*" yet percussion did not reveal the presence of fluid in the gastric cavity; the medication employed was a mixture of nitre with laurel-water and tincture of belladonna. I had not the least doubt that here was a very grave case—that in a short time the third stage would appear. This opinion of mine, which I frankly manifested to the persons interested in the patient, was received with great surprise. I saw the patient at 11 A.M. the 9th of April; at five o'clock in the evening of the 10th I was again sent for, to see him; he had had black vomit many times; his skin was yellow, his pulse small, frequent, and weak, and his urine contained much albumen. Contrary to my expectation, this young man succeeded in recovering.

The fourth symptom manifested in the second stage, at times unaccompanied by the other three, again together with moderate fever or epigastric uneasiness, and indicating that the third stage will not fail to occur, is *insomnia*. While the patient is manifestly improved, has little or no febrile reaction, and is more encouraged, he complains to his physician that he cannot sleep, that he passes the night awake, without feeling the slightest inconvenience; he attributes the lack of sleep to the prostration he experiences, and says that in this consists all his illness.

In the cases where insomnia is the signal of the appearance of the third stage, that stage is characterized by phenomena of ataxia and adynamia; the hæmorrhages are limited to merely a few vomitings of blood; this was observed by the clinical students of 1870 in a young Spaniard occupying one of the beds of the Santa Izabel ward. During two days and nights that the patient remained in the second stage of yellow fever, in almost complete apyrexia, and in the best condition, he did not manage to sleep a quarter of an hour. The fever reappeared, the tongue became dry, delirium set in, then tremor of the lips and tongue, subsultus tendinum, and carphologia; it was only just before death that two black vomits occurred.

In some exceptional cases, two other symptoms appear in the second stage, which pertain more commonly to the third, and which do not offer the same significance I have just assigned to the other four. These two symptoms are: vomiting, and yellowness of the skin.

Whether or not it has been present in the first stage, vomiting in the second is of little

importance to prognosis; still, depending almost always on excessive irritability of the stomach, when it is not due to an unremoved gastric disturbance or to a more or less intense gastritis, it makes extremely difficult the use of preventive treatment, inasmuch as this treatment exercises a somewhat irritant effect on contact with the mucous membrane of the alimentary canal. The matters expelled by the vomiting of the second stage are composed sometimes of ingested fluids, sometimes of mucus, or of bile, of variable color and quantity. This vomiting readily yields to appropriate remedies, to reappear later on in the third stage, assuming then other characteristics.

The yellow color of the skin, which becomes intense and characteristic in the third stage, at times begins to manifest itself in the second. There are cases, which were frequent in the epidemic of 1873, where this is observed in a very evident manner; the jaundice commences in the second stage, and keeps increasing gradually during convalescence, without the third stage making its appearance—so that the patient may have been cured many days, and the yellowness of the skin still remain very intense, without being accompanied by any other abnormal symptom. Admitting the theory of alteration of the blood stagnated in the capillaries to explain the sub-jaundice of the first stage, it is reasonable to suppose that the result of this alteration may be prolonged in certain instances, especially if the two first stages last many days, so that there is time for the occurrence of soaking of the tissues by the serum of the blood, stained yellow by altered hæmatin. When the first two stages have been brief, being then followed by the third, it is only during the latter, often at the end of it, or even after death, that the jaundice will become marked.

In many cases, particularly in the gravest, the second stage of yellow fever is not perceived; the first period is followed at once by the third, without any phenomenon of transition between, or else the symptoms of the two are suddenly mingled, the scenes precipitated, and the disease runs its course in the brief space of two or three days.

(*To be continued.*)

INTESTINAL OBSTRUCTION BY IMMENSE GALL-STONE.

BY THEODORE A. MC GRAW, M.D.

A woman, fifty-five years of age, with a history of gall-stone dating back to early girlhood, had suffered several days from severe abdominal pain, finally culminating in symptoms of obstruction.—Every three or four months she experienced sharp attacks of colicky pain, lasting several days, and for some time latterly she had noticed a lump in the right epigastrium as large as a small hen's-egg.

On Monday, April 2d, she began to suffer from one of her usual attacks, which continued until the following Thursday; and in the meantime was manifested intense nausea, and pain in the region of the liver. On Thursday something gave way in her side and the lump suddenly disappeared; when for two days she was apparently relieved, although never entirely free from pain.

She became, however, obstinately constipated, and on Saturday again began to vomit, the distress constantly growing worse until Monday, when the symptoms of obstruction became marked. On the evening of this day (April 9th) Doctor Chapoton asked me to see her in consultation, when she was found in great pain, vomiting a greenish fluid. The abdomen was large and somewhat bloated; moderately tender on pressure. Further measures were deferred until the next morning, when she had become evidently worse and the vomit had assumed a fæcal character. She was immediately prepared for operation and put under chloroform.

An incision of three inches was made in the median line above the navel. The fingers inserted into the abdominal cavity came almost immediately in contact with a hard body in the small intestine. The gut was seized and drawn to the surface, when it became evident that its whole calibre was filled with a prolate spheroidal body of firm consistency. The gut above was somewhat distended, although not to the extent that I have seen in many cases of obstruction; this foreign body could be moved to and fro in the intestine by slight pressure, and it was clear that there must be some other impedi-

ment to cause the decided symptoms of obstruction exhibited. I nevertheless made an incision in the bowel and removed an enormous gall-stone, measuring about one and a half inches in length, but large enough in circumference to completly fill the bowel at the junction of the jejunum and ileum; it weighed two hundred and fifty grains. The hole in the gut was immediately closed with Lembert sutures and the investigation continued. Drawing the intestine still further out, I found a few inches below a volvulus; the bowel was so twisted that at one spot it presented the appearance of a white ring; the mesentery for a length of eighteen inches was dark with spots of extravasated blood, not only at the point of the volvulus but also far above it. The twisted gut was red and covered with lymph.

The bowels were washed with sterilized water and replaced in the abdomen, and the wound closed. The patient immediately improved. Her vomiting did not recur, nor did she suffer any more pain. Her convalescence began on the very day of the operation, and was only slightly retarded by a stitch abscess in the abdominal wall.

The pathology of this case is plain: An enormous concretion had formed in the gall-bladder and there produced continual irritation. The gall-bladder had become attached to the neighboring intestine by adhesive inflammation, and the spot of adhesion had eventually become the seat of ulceration. An orifice of communication had formed between the gall-bladder and intestine, through which the gall-stone entered the bowel. Here the concretion was forced onward by the contraction of the intestinal walls, and during its progress the patient suffered much pain. It progressed, however, without mishap through the larger jejunum, but as the gut became smaller its progress became more difficult. It finally caused terrific pain, and the spasm of the intestine produced by its presence was made evident by the spots of extravasated blood in the mesentery. Finally the spasm produced a volvulus, and then occurred the complete obstruction.

It is probable that death occurs from such causes more frequently than has been supposed. Doctor Longyear showed a similar stone to the Detroit Medical and Library Association, which he had removed post-mortem from a patient who had died from obstruction caused by its presence in the bowel; and cases are on record in which even quite small stones have in this way produced death.

It is probable that patients are treated too long medicinally for gall-stones, which demand surgical interference. Only recently, for Doctor Newman, I removed one hundred and fifty gall-stones from the gall-bladder of a woman who had been suffering pain and distress for six weeks, with many severe attacks of vomiting. The incision of the gall-bladder and the removal of the stones gave immediate relief. When patients suffer continual attacks of agonizing colic, the physician should feel that the time has come to seek relief at the hands of the surgeon.

Detroit, Michigan.

FAILURE OF HAFFKINISM.

The *Times* (London) says that during the recent cholera epidemic at Lucknow several soldiers were attacked who had been inoculated with Haffkine's virus, and that the proportion of mortality among them was the same as among the uninoculated. This contradicts the results so loudly promulgated by Haffkine and Simpson last June, when it was said that none of those inoculated were attacked by the disease.

We have before remarked in these columns* upon the humbuggery of Haffkinism, and the fact that the converts thereto are chiefly outside the pale of the medical profession; also, that it is passing strange Haffkine found it necessary to make the long journey from the shores of the German Ocean to Eastern Hindustan for the benefit of science and suffering humanity, when the same objects could have been much more readily attained in Europe where the expectation of the recrudescence of the disease has been fulfilled.

Another remarkable fact is, that although cholera is constantly endemic to certain portions of India, Haffkine carefully avoids these, preferring to experiment only in districts where the test of his theory will be far from crucial.

* MEDICAL AGE, December 11th, 1893, page 718.

Correspondence.

MANAGEMENT OF FISTULA IN ANO, WITHOUT OPERATION.

Editor MEDICAL AGE:

Mrs. G. J——, aged twenty-four, mother of two children, consulted me September 2d, 1892. Had been troubled with constipation ever since she could remember, and so persistent that a natural movement of the bowels seldom occurred. She also informed me that she had suffered from fistula for eleven years, and had recently been advised to submit to an operation, which she refused. This fistula was more troublesome whenever the constipation was neglected.

Upon examination the following condition was found: A fistulous opening to the right side of anal margin, about one inch, and at about one inch depth divided into two branches, one being apparently blind, and the other entering the rectum at a distance of one and one-half to two inches.

A short time previous to this I had noticed the report of a case of fistula-in-ano relieved by injections of a strong solution of potassium permanganate, followed by the introduction (upon a grooved director) of an iodoform ointment, and repeated every two or three days.

As this was a case where operation was refused, I determined to try similar treatment, and accordingly ordered for the constipation:

℞ Ext. cascara sagrada, fld. (P., D. & Co.), 7½ drachms.
Ext. belladonna, fld., ½ scruple.
Ext. nux vomica, 1 drachm.
Simple elixir, q. s. ad 3 ounces.

Half a teaspoonful in wineglass of water after each meal, gradually reducing the dose.

This proved all that was required for the relief of the constipation.

I then injected into the fistulous tract, by means of an ordinary glass syringe, the following:

℞ Permanganate potash, ½ drachm.
Distilled water, 1 ounce.

I then introduced the iodoform ointment —one drachm to the ounce—upon a grooved director, penetrating as deeply as possible, and at the same time gently twirling the instrument between my thumb and finger.

I repeated permanganate injections and application of iodoform ointment every two or three days for a period of two weeks, and then gradually lengthened the period between sittings, until finally the opening closed. This was more than two years ago, and the cure is complete, the fistula never having reopened. It had frequently closed for a day or so, before, and then again opened with an increased discharge.

Now, the query is this: How much is due, in this case, to the relief of the constipation; and how much to the method of treatment as just outlined? If fistulæ can be cured, even in a small proportion of cases, by such a simple procedure, it seems that the profession should know of it; and such is the object in reporting this case. I hope that others will try it when opportunity presents and report success or failure.

GEORGE H. GOODYEAR.

Milbank, South Dakota.

SUBLINQUAL MEDICATION.

Editor MEDICAL AGE:

Not only does the sublingual space absorb liquids, but it is well known that the whole body takes up liquids more or less readily in proportion to the vascularity of the region with which the liquid comes in contact.

The skin absorbs liquids quite readily, but not so rapidly as the mucous membrane. That the latter will take up medicaments is well known and has been practiced for a long time. All the mucous membrane of the mouth has an absorptive power, but the tongue on its under and especially its upper surface is the chief absorbing organ in the mouth and where absorption is the most rapid.

The sublingual glands continually secrete their production, and the top of the tongue is nearly always bathed in mucus; consequently if the medicament be placed under the tongue it will naturally flow backward to the sides and upper surface of the organ and be absorbed.

The mucous membrane that covers the tongue is copiously supplied with papillæ, which are again covered by a very thin epithelium and filled with a network of blood-vessels and nerves, so favoring the osmotic action of the organ.

Medicines having a peculiar effect on the nervous system, like croton oil, will act best by being absorbed by the mucous membrane of the tongue. In cases where the tongue is dry, as in low forms of fever, the absorptive power is less, or may be entirely absent; the secretion from the glands is scanty or has ceased entirely. In such a condition much cannot be expected from sublingual medication.

I have employed sublingual medication for a number of years and found it extremely satisfactory. I have had occasion to prescribe nitro-glycerin a great deal, and always

instruct patients to dissolve the granules under the tongue: The full action of the remedy will be felt in about forty seconds. I have given morphine the same way, and personally take calomel by this method and it usually acts in from one-half to one hour.

The advantage of placing the medicine under the tongue is that it will not be immediately swallowed, but, diffusing itself through the buccal cavity, will be largely absorbed by osmotic action.

Very truly yours,
J. E. ENGSTAD.

Grand Forks, N. Dakota.

ANTISEPTIC PROPERTIES OF PERFUMERY.

The art of perfumery must have been born with the world. As far back as ancient history can lead us, we find that perfumery held a large place in the daily life of man, and above all of woman. The East is redolent with spikenard and thyme, marjolaine, dietaine. The Bible speaks constantly of perfumes and sweet-smelling odors; the Egyptians of the time of the Pharaohs washed their bodies and their tombs in scented water, the dandies little suspecting that they were using very efficient antiseptics. The superb daughters of Greece did not dream that the essences of marjolaine with which they washed their luxuriant tresses, or the thyme that they reserved for the neck and knee, would one day be classed among the essences which kill the bacilli of typhoid fever in less than twenty-four hours. To-day perfumes have entered the domain of therapeutics. The essence of cinnamon, according to Chamberland, destroys the typhus microbe in twelve hours; the essences of cloves, patchouli and santal have the same properties; while juniper, roses and lemon give the same result in from twenty-four to forty-eight hours. It is not necessary to recall the rôle that perfumes fulfilled in the funereal rites of the Egyptians; it was with aromatics and resins that they embalmed the bodies of their dead, and the mummies which have come down to us prove well the efficacy of the different perfumes employed. A fact just related by Doctor Sée corroborates the importance of these agents. "Quite lately," said he, "a grave-digger in the course of his work brought to light the coffin of a man who had died two years before from pneumonia. The corpse was in a good state of preservation; the clothes, even, were but little deteriorated. Doctor Sée learned that the son of the deceased, in order to avoid any unpleasantness to the pall-bearers from the smell, freely sprinkled the corpse and shroud with essence of lavender. —*Medical Press and Circular.*

The Medical Age.

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Editorial.

A NATION'S SORROW.

Oliver Wendell Holmes, the greatest of modern authors, poets, and wits, is no more, having died at his residence, Beacon street, Boston, October 7th, as the result—so the Associated Press informs us—of "a complication of diseases." Although it was understood in August last that Doctor Holmes had celebrated his eighty-sixth birthday and was "hale and hearty," the fact was known among intimates that he was absolutely an invalid and, moreover, had been in feeble health for a long period. Up to the last, however, Doctor Holmes received his friends, and his geniality and vivacity were such that visitors went away impressed with the idea that he retained his pristine strength and vigor to a remarkable degree.

It seems the "Autocrat"—as he is familiarly called—in the latter days of September returned from his summer's sojourn at Beverly Farms, and that the fatigue incidental thereto induced effects most untoward, which doubtless contributed to hasten his demise.

Doctor Holmes was born in Cambridge, Massachusetts, and there resided for a large portion of his life. He graduated from Harvard College at the age of twenty, and began the study of law, which he soon abandoned for that of medicine. After taking the degree of M. D., also at Harvard, he spent some years in the hospitals of Europe, notably in Paris where he was a pupil of Louis. In 1836 he returned to Boston to enter upon active practice, and two years later was elected Professor of Physiology and Anatomy at Dartmouth Medical School, Hanover, New Hampshire. In 1847 he was tendered, and accepted, a similar professorship in the Medical Department of Harvard University, which he retained up to 1882,

when he voluntarily retired; nevertheless not a session has passed since that date that he has not favored the classes with one or more lectures.

It is as "The Autocrat" that Doctor Holmes is best known to the public at large —indeed his literary labors have overshadowed those in the domain of science, though the latter were equally as great and among members of the medical profession will be equally as lasting. His reputation as a poet was established early in 1831. In 1857 he began in the *Atlantic Monthly* "The Autocrat at the Breakfast Table," which was the precursor of "The Professor at the Breakfast Table" in 1860, which in turn was the parent of "The Poet at the Breakfast Table," published in 1872; all are unbounded favorites wherever the English language is read. In 1875 he contributed the "Newport Folio." In addition he published "Astræa" in 1850; "Currents and Counter-Currents in Medical Science" in 1860; "Elsie Venner"—also known as "The Professor's Story"—in 1861; "Border Lands in Some Provinces of Medical Science" in 1862; "Songs in Many Keys" and "Soundings from the Atlantic" in 1864; "Humorous Poems" in 1865; "The Guardian Angel" in 1868; "Mechanism in Thought and Morals" in 1870; "Songs of Many Seasons" in 1874; "John L. Motley," a memoir, in 1878; "The Iron Gate, and Other Poems" in 1880; "Medical Essays," and "Pages from an Old Volume of Life," in 1883; "Ralph Waldo Emerson in 1884; "A Moral Antipathy," and likewise "Our Hundred Days in Europe," 1887; "Before the Curfew," 1888. Aside from all these he contributed numerous poems, songs and lyrics for reunions, dinners, and other festive occasions. In his early career he was several times prize essayist of the Massachusetts Medical Society, and notably two of these papers, one on "Diseases of the Heart," and another on "Puerperal Fever," have never been equaled in any language—they are to-day as much epitomes of all that is known about these maladies as they were on the days when written, and evidence that Professor Holmes at the age of twenty-five was sixty years ahead of his time. On one occasion (1836–7) he won three of the four Boylston prizes offered for medical dissertations, in essays on "Indigenous Intermittent Fever in New England," "Neuralgia," and "Direct Exploration"—all are still medical classics. Altogether Oliver Wendell Holmes was the author of forty-two works on medical subjects, and he lived to see his early ideas of medicine, which at first met condemnation, accepted by the profession the world over.

As a prose-writer Doctor Holmes had no superior; as a poet he was positively without an equal. The test of a true poet is the ability to express thoughts not only in true meter, but as concisely as if they were embodied in prose. It was in this that Doctor Holmes was eminently superior, since his poetry often expressed sentiments much more briefly and clearly than could possibly have been done by any prose method.

As a medical teacher in his particular branch he also had no peer. Neither anatomy or physiology is supposed to be conducive to mirth or interest, but only to hard-headed plodding, yet Doctor Holmes had a way of so presenting his themes as to attract and hold the interest of the dullest, and in consequence his classes were far more popular than those which devoted attention to apparently much more interesting subjects. He had also the delightful faculty of impressing a point in such a way that the most meagre intellect could not fail to grasp or the most deficient memory to retain.

Few men have won such fame. It is rarely allotted to one individual to be at the same time without a peer in the noblest branch of science, in literature, in belles lettres and art; yet such was Doctor Holmes, and as such his memory will remain green long after his generation, and those immediately succeeding, shall have been forgotten.

Personally he was one of the most charming and lovable of men. The savant, the mechanic and the plowboy were equally welcome to his sanctum; each was made to feel equally at home; and none ever left his presence without feeling that the world had been made better and brighter by the privilege afforded. He likewise learned from all; he was a true humorist in that he saw and availed himself of all there was in life, yet never in a way that could be offensive. Even when he pictured the foibles of human-

ity it was ever so delicately done that the victims themselves rejoiced that they had been able to furnish a type therefor. Indeed the character of Doctor Holmes was a fit companion for his master mind. His courtesy and kindness were unbounded; his heart was warm beyond that of most men. His deeds of charity were vastly greater than those of most, and yet withal were unostentatious and unknown; there was not the least atom of the Pharisee in his composition.

His loss is not to America alone. He was as well known abroad as in his native town. In England his writings were read with avidity, and the extent of his appreciation by our trans-Atlantic cousins is boundless. It may well be said the Autocrat "fought the good fight" of life, and that he "filled to the full the measure of the cup of righteousness" allotted to man. The world at large and the medical profession mourn the loss of the grandest man of the nineteenth century.

MODERN CIVILIZATION AND PHYSICAL DEGENERACY.

Among the papers submitted at the last Congress of Hygiene and Demography, at Budapest, that of Doctor Julius Donath on the subject above cited possesses a general and melancholy interest, aside from its particular bearing on the conditions prevailing in the Austro-Hungarian Empire.

The assertion that the progress of civilization is purchased at the cost of physical vigor and health is no novelty; but specific data and vivid portrayals of the actual evil have never been accessible. The gradual lowering of the stature required for military service affords no criterion, since the increase of military equipment all over Europe has made it inevitable that the governments should relax the severity of their tests. The greater the number of recruits, the less fastidious can the authorities afford to be; and each successive enrollment means the acceptance of recruits previously rejected on the score of physical unfitness.

Applying a very keen analysis to the official statistics compiled by Hungary, Austria, Germany, France, and Italy (Russia offers no accessible data), and exercising the greatest care to exclude the possibility of erroneous deduction, Doctor Donath finds that in each land the number of adults useless or unavailable for military service is steadily augmenting. In France, for example, the number of rejected or unsuitable adults increased from 6.9 per cent. in 1872 to 13.3 per cent. in 1888, having almost doubled in the interval.

The question naturally arises: What can be the cause of this physical deterioration in the people of our modern civilized States?

There are a number of minor factors, which Doctor Donath first cites: Perverted methods of rearing and educating the young: Disregard of sanitary principles in the schools: The enervating and degenerating effect of luxury and the eager pursuit of pleasure among the higher classes: But the all-important factor in the condition of a given population is the abundance or scarcity of means for nourishing and satisfying the more clamorous necessities of the lower classes, which so far predominate in numbers—and in this respect matters are no better in agricultural Hungary than in industrial Austria. In brief, the physical state of the population depends primarily on the conditions of production.

The first and most important step which is incumbent on the modern State, if it would check the progressive physical decline of its inhabitants, is the shortening of the hours of labor. International accord in this respect would be most desirable; but this indispensable measure, demanded by the common weal, should not be left to depend on international convention. The undue prolongation of the hours of labor drains and enfeebles the capacity of the laborer, swells the army of the unemployed and, of course, heightens the difficulty of providing them sustenance. Experience has now taught us that the diminution of the daily term of labor does not reduce the fund of work accomplished; on the contrary, that fund is increased, because the laborer is no longer forced to suffer from chronic exhaustion. His power of attention being less dulled and blunted, he protects himself better from accident, and is also less subject to disease.

England's example in this respect is most salutary. In one of the last sessions of the House of Commons, the Secretary of Finance declared during the discussion of the war

budget that the introduction of the eight-hour day of labor in the arsenal shops operated by the Government had proved more successful than was expected: under the new system the workmen were actually able to earn better wages than before.

The State, particularly in Europe, devotes much attention to the improvement of horses and of the important domestic animals, making substantial sacrifices to prevent their deterioration. Should a less tender guardianship be the lot of the human being—whose organization is the most perfect known to science, whose form is the delight of the artist, whose development is the palpable and fundamental aim of the State? Is not the moral and intellectual well-being of humanity inseparable from its physical welfare? Is the modern State to be the mythological Chronos who devours his children—the "land" of the Scripture which "consumes its people?" Uncounted ages of struggle for existence, and of slow, painful development, have handed down to us a noble heritage: let us transmit it augmented, not lessened, to posterity!

EDITORIAL NOTES.

A New Gas.—

At a recent meeting of the British Association of Science was announced the discovery of a new element in chemistry. Lord Rayleigh and Professor Ramsay found that nitrogen is no longer an element but a compound; that nitrogen from air has a different density from that of the same gas obtained from other sources. When they treated what was supposed to be pure atmospheric nitrogen with magnesium, the nitrogen was absorbed, but a residue remained that proved to be a dense and remarkably inert gas, twenty-one times heavier than hydrogen and fifty per cent. heavier than nitrogen. The spectrum was new, showing a single blue line, much more intense than the corresponding line in the nitrogen spectrum.

Canadian Medical Association.—

The officers of this organization for 1895 are: President, Doctor Bayard; General Secretary, F. N. G. Starr (Toronto); Treasurer, Doctor Small (Ottawa); Vice-Presidents, Doctors Shaw (Hamilton), Armstrong (Montreal), McLaren (New Brunswick), McKeen (Nova Scotia), Blanchard (Manitoba), Haultain (N. W. T.), Maclaren (P. E. I.), Edwards (B. C.). Provincial Secretaries for the Provinces in order: Fenwick (Kingston), Campbell (Montreal), McNally (N. B.), Hattie (Nova Scotia), Nelson (Manitoba), Macdonald (N. W. T.), McNeil (P. E. I.), Richardson (B. C.).

The History of Medicine.—

A series of ten lectures are in course of delivery by Doctor Roswell Park, at Alumni Hall, Medical Department of the University of Buffalo. The first three of the series were delivered October 8th, 15th, and 22d, and the remainder will appear succeeding Monday evenings.

These lectures have been so prepared as to treat of political, religious, philosophical, and other issues, including the progress of medical sciences. They are open to all who are interested.

A Deserved Honor.—

A statue in bronze, in remembrance of Doctor J. Marion Sims, was unveiled October 20th in Bryant Park, Forty-second street and Sixth avenue, New York. Addresses were made by Doctors George F. Shrady and Paul F. Mundé, and the statue accepted in behalf of the city by Honorable Thomas F. Gilroy, Mayor. This was a memorable occasion, and the first instance of the erection of a heroic statue to the memory of a member of the medical profession of the United States.

Death of Doctor Henry F. Lyster.—

This gentleman, aged fifty-eight years, one of the best known physicians of Detroit, died quite suddenly, October 4th, while on a Michigan Central train bound for Chicago. Doctor Lyster was a life-long resident of Detroit, and was well known in connection with the Detroit Medical College, and also with the old Michigan College of Medicine, of which he was the President.

The Southern Surgical and Gynæcological Association.—

This organization will hold its next session in Charleston, S. C., November 13th, 14th, and 15th. The profession is cordially invited.

Items and News.

Parental Experiment.—

A month after our first baby was born, we resolved to settle by experiment a question which we had discussed for months, namely, whether a child's tendency to violate the rules of grammar is innate, or is acquired through the sense of hearing.

My wife declared that all children, no matter what their surroundings, will say, "Me wants sugar," until they are taught that it is proper to say, "I want sugar;" while I contended that a child would speak grammatically from the beginning if he were not permitted to hear any ungrammatical talk.

We had little difficulty in making the experiment thorough. We lived three miles from the village, and our only regular visitors were the doctor and the minister, both well educated men; and we resolved that our boy should not be within earshot when anyone called whose ability to speak pure English could be disputed.

Of course, we set a good example ourselves. We refrained from baby talk; used only the most polished language in the presence of our boy, and took particular pains to repeat before him in grammatical style those expressions which are usually the first in a child's vocabulary.

For instance, when he was less than a year old, he would sit in his mother's lap staring at us while I remarked, seriously and with great distinctness, "I want no water;" and my wife would say, in an equally impressive manner, "No, I do not want any." Then when we thought that the little fellow must have gained some idea of the proper use of negatives, my wife would offer a suggestion of this sort: "William, the cups *are* empty;" and I would proclaim that "My hands *are* cold."

We knew it would be useless at that time to try to teach anything, but I cherished an abiding faith that the memory of our polished conversation would remain with him, and my wife adhered loyally to her agreement to make the experiment as thorough as possible.

When our boy had passed his fifteenth month, we began to look forward anxiously to the result. We were sure that never in his brief life had he heard an ungrammatical sentence, and we agreed that his first expressions would forever settle the question involved.

When he was sixteen months old he began to name articles of food with some distinctness. A month later he could couple two words. Then came the climax. He was just eighteen months and twelve days old when he launched his first sentence, and, I may add, knocked my pet theory "into a cocked hat." It happened at the breakfast table. My wife was telling me that little Willy's appetite seemed to be failing lately, and was trying to tempt him with a spoonful of jam, when he leaned back in his high chair, made a wry face, and said with terrible distinctness, "Me don't want no dam."

My wife was generous. She did not laugh aloud. She did not say "I told you so." But she was right. The tendency to violate the rules of grammar is born to man, just as the tendency to commit sin is born to him.—W. L. RIORDON, in *Youth's Companion.*

How to Prevent the Spread of Venereal.—

Every woman known to be a person of ill-fame should be duly licensed. She should be compelled to attend twice a week at some municipal building set aside for this purpose, there to undergo a proper medical examination by a physician appointed by the State, who should also enter her name, address and description in a book as a means of identification, and endorse her license, such endorsement to hold good until next examination. If found diseased she should be sent to the nearest state hospital. * * *

No male should be allowed to marry or to obtain a marriage license until he shall produce before the recorder a certificate from a physician stating that he is not contagious in a venereal sense, and that he has not contracted syphilis for three years past.

All wet nurses should, before entering on their duties, obtain a certificate of health from the certifying physicians.

All vaccination should be done solely by calf lymph.—*Pacific Medical Journal.*

Pilules de Beecham.—

The vendors of proprietary medicines are so sharply looked after in France, and quacks extinguished so summarily, that it was somewhat surprising to see in August last in the advertisement sheets of the *Journal de Médecine*, in the largest type: "PILULES DE BEECHAM. *Laxatives et purgatives. Employées en toutes les affections de l'appareil gastro-hépatique,*" etc. A little lower down was the shameless lie, "*Elles sont employées dans les hôpitaux en Angleterre!*" But the most significant point is that the advertisement appeared *once*, but *once only*. When shall we have the papers, lay and clerical, in this country expurgated as healthily? To see these and other abominable shams—compounds of Cape aloes and potato-starch—reminds one of the old sailor's "sentiment"—

"May we all turn out rogues!" Surely it is the duty of every honest man to expose them, and to urge upon the Government some measure for putting an end to a traffic so disgraceful.—*Provincial Medical Journal.*

Life Assurance and Suicide.—

From a medical standpoint—whatever the legal may be—*every* company should be made to pay the insurance of every suicide. A man who commits suicide is suffering from some form of disease, either physical or mental. If this is present at the time the policy is written, the medical examiner is in duty bound to report it; if it does not exist, the applicant is a good risk, and if he commit suicide after the acceptance of the application the policy should not be void by the mere act of self-destruction. Any company that will contest a claim of this kind is not deserving of support; and particularly from physicians, who are liable to meet death under circumstances which might point to suicide and yet unjustly. Such companies should be discriminated against.—*Kansas City Medical Index.*

Conservatism vs. the Knife.—

The use of the knife has gone too far. The reaction for which we have been looking for some time has begun. We are glad to see that it is led by such men as Goodell, Lusk, and Polk. Doctor Goodell has recently said that he is now curing a great many cases without surgical interference which he formerly supposed could not be remedied without most radical measures. Such days will be heralded with glad tidings by the profession as a whole.—*Medical Progress.*

An Object Lesson.—

Lawson Tait reports that some years ago he read a paper upon "The Technique of Oöphorectomy" before a provincial society. Some months later, upon his return to the same society, he was surprised to see "whole soup-platefuls of ovaries" brought in by the enthusiastic members who had been impressed with the idea that oöphorectomy is *so* easy. And most of these ovaries *were normal*, while many of the owners slept beneath the sod!

Rather Wide of the Mark.—

A student who was being examined on the physiology of the throat and chest was asked by the professor what passed through the cavity of the spinal column.

The budding medico, mistaking the vertebræ for the passage leading directly from the mouth to the stomach, answered, with a merry twinkle in his eye:

"Many a good glass of whiskey passes down that way!"—*Medical Press and Circular.*

Where, Oh Where!—

"Where shall we be at the close of the present century, if this bacteria- and bacilli-hunting craze continues for six more years?" asks a worried doctor.

Just where we were before. The microbe has always existed, even though his hunters are a new thing. If a man says to you, "There is a microbe in the pot," tell him that is a chestnut, and eat your fill as your fathers did before you.—*Homœopathic Recorder.*

Sharp Practice.—

A man in Germany recently bought 1,000 cigars and had them insured against fire. Then he smoked them, and demanded the amount of his policy from the insurance company. The company refusing to pay it, he brought suit *and got a verdict.—New York Tribune.*

An Epitaph.—

On a tombstone in Dymock cemetery in Gloucestershire, England, the following appears:

Two sweeter babes you ne'er did see,
Than God a'mighty gave to we.
But they were o'ertaken wi' ague fits,
And here they lys as dead as nits.

"Perchance to Dream."—

I am so weary,—yet I fear to sleep!
How hard it seems to lose myself,—to go
To that strange world where tyrant Dreams hold rule;
Where I may kill my friend, or wed my foe.

—MARGARET GEORGE, in *Lippincott's.*

The Medical Abuse of Opium.—

We have an army of women in America dying from the opium habit—larger than our standing army. The profession is wholly responsible for the loose and indiscriminate use of the drug.—DOCTOR JOSEPH PRICE.

To "Heal the Aching Void."—

A Miss Rafferty, of Manchester, New Jersey, is suing Mr. Ives, her former lover, for damages, caused, she avers, by his kissing her until the gold filling in her front teeth fell out!

A Tobacco Centenarian.—

Miss Hannah Chard, of Ferrell, New Jersey, celebrated her one hundred and fifth birthday recently. She is an inveterate and life-long smoker.

Book Reviews.

LECTURES ON SURGERY. By David W. Cheever, A.B., M.D. Cloth; 16mo; pp. 591. Price, $1.75. Damrell & Upham, Boston.

Within the scope undertaken, this work is the most thorough, able and satisfactory that has been published in the United States during the last quarter of a century. There is probably no man in the United States so able to write upon surgical topics as Doctor Cheever, and that he does not appear more often as an author is doubtless due to lack of time, not to want of resource—perhaps also in part to the fact that works of this class during the last two decades exhibit little that is new, and are prepared with the object of bringing the author or the editor before the public rather than to serve any educational purpose. In the first chapter appears an aphorism that should be perused and remembered by all, viz.: "Although the operative part of surgery is brilliant, it is not the best part nor does it require the highest attributes of mind." Doctor Cheever then shows that surgery can have but two objects —to relieve suffering and prolong life—objects that appear to have been largely forgotten in these latter days.

The chapters devoted to anæsthetics contrast ably the effects of ether and chloroform, preference naturally being given to the former.

The lecture on *mania a potu* is a most important one, and the author truly sums up the demand and management in the words "food, nutrition, and sleep."

The volume is issued in most convenient form, and, as already remarked, is one of the most valuable contributions to the surgical literature of the century: indeed, it is the only *purely original* work in its class that has emanated from the American press for a quarter of a century.

NEW LIGHT FROM THE GREAT PYRAMID. By Albert Ross Parsons. Cloth; 8vo; pp. 420. Price, $4.00. The Metaphysical Publishing Co., New York.

In connection with the Great Pyramid, Mr. Parsons advances novel theories which he advocates with no little ability and enthusiasm. Moreover, he gives evidence of having devoted long and careful examination to the subject, and consequently commands attention even when readers do not agree with his conclusions.

He advances several distinctive propositions bearing upon the religious progress of the world and the evolution of Christianity from paganism. Historic Christianity is declared to be related to ancient cosmic science and religion. He finds in the Scriptures references to a prehistoric religion—later epitomized into what is known as the Apostolic creed—and evidence in various forms and ceremonies that these must have been included in the rituals of the sacred mysteries. He also develops the character and mission of Christ, and commends his teaching as highest and best—charged with elements that shall yet give it universal credence. The best and most authentic communication from God to man he considers to be the Hebrew Bible, the secret of the interpretation of which would have been lost but for the preservation of a monument on the banks of the Nile, which contains the practical application of an esoteric secret. The author holds, moreover, that the use of the Bible method of the display of divine cosmogony, is to be found pure and truthful in some of the grandest ritual features of the Romish church, and that the same by geometrical display is embodied in the principles of Masonry; as between the two systems in their ultimate there is little difference. The volume as a whole is an earnest call to hold all things precious, and to seek for enlightenment, to believe in God and cultivate a heart of trust, when Divinity will guide into all truth.

LITTELL'S LIVING AGE. Price, 15 cents; $8.00 per year. Littell & Co., Boston.

The value of *Littell's Living Age* as an educator cannot be easily over-estimated. It would be an interesting study, were it possible, to trace its exact influence during the fifty years of its existence in developing a refined and catholic taste. It certainly is not too much to say for it that it has from the first had a formative influence upon American thought, and upon the expression of that thought in American literature. And it increases in value as it grows older and as the number of foreign magazines increases. Recent issues contain some magnificent articles: notably one by Gladstone, in the issue of September 8th, on "The Place of Heresy and Schism in the Modern Christian Church," and "The Poetry of Robert Bridges," by Edward Dowden in the number dated August 25th. "Alsace and Lorraine," "Competitive Examinations in China," "History of English Policy," "Iceland To-day," and many others equally good, testify to the undiminished lustre of this brilliant eclectic, proving it still the well-nigh indispensable friend of the intelligent and educated people of this busy age.

No better opportunity was ever offered for subscribing to this magazine, for the publishers will send *absolutely free* the weekly issues for the remainder of this year to every *new* subscriber *now* remitting for the year 1895.

MONTHLY BULLETIN OF THE BUREAU OF AMERICAN REPUBLICS. Price, 10 cents; $1.00 per year. Published by the Bureau, Washington. D. C.

The July number contains an excellent paper upon "English and Spanish Horses," by E. T. Riddick. There is also an essay devoted to "Cotton States and International Exposition," and another upon the "Price of Public Lands in Mexico." There are reports from the Argentine Republic, Chili, Nicaragua, Equador, Guatemala, along with commercial and industrial information, and a short biographical sketch of Don Idiarte Borda, the new President of Banda Oriental (Uruguay).

From the same source we are in receipt of two pamphlets, one devoted to commercial and industrial information regarding the American Republics; Gold Mining in British Guiana; Import Duties of Guatemala. The other, Treasury Receipts in Mexico for 1894; Mexican Tariff Modification; Mexican National Library; Mexican Fruit Industry; Miscellaneous News from Mexico; Jamaica.

THE CANADIAN MAGAZINE. Price, 25 cents; $2.50 per year. Ontario Publishing Co., Toronto.

The following are the contents of the September number: "The Early Parliamentary Franchise of England," by Thomas Hodgins; "Ford vs. De Pontes, 30 Beaven, 572," by Elgin Myers; "The Gate of Lake Michigan," by Captain J. A. Currie; "The Canadian Constitution," by Edward Meek; "At Minas Basin," poem, by Theodore H. Rand; "Cecil Rhodes and South Africa," by J. Castell Hopkins; "Ahmet," poem, by William Wilfred Campbell; "With the Prairie Chicken in Manitoba," by R. S. Masson; "Irrigation in the Arid Regions of America," by Harry S. Inglis; "Monastery at La Trappe," by Clifford Smith; "The Pagan Iroquois," by A. H. H. Heming; "Production of Wheat in Canada," by Sydney C. D. Roper; "The Morals of the British Columbia Election," by R. E. Gosnell; "Who Was He?" by Miss C. A. Fraser; "Gable Ends," etc.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 per year. J. B. Lippincott Company, Philadelphia.

The complete novel in the October number is "A Question of Courage," by Francis Lynde. "Coals of Fire" is a military tale by LeRoy Armstrong. Margaret Langdon writes "A Tragedy of Trade;" Elizabeth Knowlton Carter on "An Hour Before Death;" Gertrude Atherton on "Famous Rivalries of Women;" George J. Varney traces the progress of "Telegraphy up to Date;" James Knapp Reeve contributes "In the October Woods;" David Graham Adee, "The Ballad of the Drum;" Saburo Arai, "Japanese and Chinese Porcelains and their Imitations;" "At the Little Red House" is by Kate Jordan; "Localized Virtue," by Felix L. Oswald; "The Snub," by Kate Milner Rabb. Besides quatrains by Margaret Gilman George and L. Worthington Green, the other poems of the number are by Florence Earle Coates, Celia A. Hayward, Emma J. Gompf, and Harrison S. Morris.

THE ATLANTIC MONTHLY. Price, 35 cents; $4.00 a year. Houghton, Mifflin & Co., Boston.

"Philip and His Wife," by Mrs. Deland, ends in the October number. Other contributions are: "Retrospect of an Octogenarian," by George E. Ellis; "His Honor," by Ellen Mackubin; part two of "Reports of the Plato Club," by Herbert Austin Aikins; "A Russian Holy City," by Isabel F. Hapgood; "And Ghosts Break Up Their Graves," by John Vance Cheney; "Recollections of Stanton Uuder Johnson," by Henry L. Dawes; "Heartsease," by Alice Brown; "At Halata," by Lafcadio Hearn; "Land of My Dreams," by Louise Chandler Moulton; "A Playwright's Novitiate," by Miriam Coles Harris; "Our Quinzaine at La Salette," by Anna Pierrepont McIlvaine; "The Railway War," by Henry J. Fletcher; "Man and Men in Nature;" "The Mediæval Towns of England;" "African Exploration and Travel." There are also the usual "Comments on New Books," and "Contributors' Club."

THE DELINEATOR. Price, 15 cents; $1.00 a year. The Butterick Publishing Co., New York.

The October number contains, in addition to fashion matter, a paper on "Fitting Out the Family for Autumn and Winter." There are also articles on "Seasonable Cookery," on "Serving Peaches, Apricots, and Plums," and "The Use of the House." "Life and Work at Mount Holyoke College" are treated by a recent graduate, and there is a practical contribution on "Millinery as an Employment for Women." "The Relations Between Mother and Daughter" is concluded; in "How to Live Wisely," the subject of illness is ably discussed. Instruction in artistic handcraft is given in Venetian iron work

and the "Uses of Crêpe and Tissue Papers," and entertainment is provided in a "Hallowe'en German and a Chrysanthemum Party." "Around the Tea-Table" is as gossipy as usual; there are (as usual) papers on "Knitting," "Netting," "Lace-Making," etc.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 a year. Charles Scribner's Sons, New York.

The October number contains the first portion of a paper devoted to "Railroad Travel in England and America," by H. G. Prout; "Lenox," by George A. Hibbard, concludes the articles on American summer resorts; Doctor Roosevelt describes life "In the Hospital," and Doctor Carl Lumholtz continues his observations on the Tarahumari Indians of Mexico. The number is strong in fiction, containing a short story by Mary Tappàn Wright, entitled "From Macedonia;" Thomas Nelson Page's war story, "Little Darby;" continuation of "John March, Southerner," by George W. Cable; and there are poems by Julia Dorr, Edith Wharton, Henry Tyrrell, and John Ingham.

MCCLURE'S MAGAZINE. Price, 15 cents; $1.50 per year. S. S. McClure (Limited), New York.

The opening article is "Mr. Dana of *The Sun*," by Edward P. Mitchell. The following tales are also provided: "Sweethearts," by A. Conan Doyle; "A Deal on 'Change," by Robert Barr; "Young Robin Grey," by Bret Harte; "Flying Through Flames," by Cy Warman; "The Capture of Niagara," by E. Jay Edwards. There are also "Human Documents;" "Advances in Knowledge of Moon's Surface," by Edward S. Holden; "Inoculation Against Snake Poison," by Henry J. W. Dam; "Palmer Cox's Brownies on the Stage," by Ben Teal. The poetry is by Thomas Dekker, John McCann, and Francis Saltus.

GODEY'S MAGAZINE. Price, 10 cents; $1.00 a year. The Godey Co., New York.

The September number opens with "Seward at Hayti;" then follows "Out of the World," a serial, by Louise R. Baker; "A Night Ascent of Mount Ætna" is by Charles H. Adams; "Feasting in the Olden Time," by Mrs. Burton Kingsland; "A Conscientious Coquette," by John D. Barry; "The Dolorous Experience of Kuku," by Albert White Vorse; "Rare Days with the Birds," by Leander S. Keyser; "The Senate Vaudeville," by James Burton Reynolds; "Even Unto the Tenth Generation," by Francis Churchill Williams. The poetry is by Charles F. Lester and Norma Muir.

Therapeutic Brevities.

Sulphur in Surgery.—W. Arbuthnot Laner declares there is no topical remedy so perfectly satisfactory in its results in cases of lupus as Sulphur, whether in the form of powder, emulsion, or ointment. In every case in which he has used it a rapid relief has resulted, with practically no destruction of tissue other than the lupus tissue. In case of cancerous or sarcomatous ulceration, he says the destruction of the soft parts can be regulated and determined very accurately. Unlike the escharotics in common use, Sulphur has practically no effect on healthy cutaneous or mucous surfaces, but requires the action of a granulating raw surface to determine the formation of sulphurous and sulphuric acids, which are apparently the agents that influence the vitality of the organisms and tissues with which they come in contact. Mr. Laner has also found Sulphur most useful in the foul ulcerative stomatitis which is so common among the children of the poor, and so obstinately resists the local treatment usually adopted. In such cases, if gauze or wool dusted abundantly with the finely powdered drug is retained in firm contact with the foul ulcerated surface for an hour or two, sufficient destruction results to clear the surface of its infective organisms, and it then heals rapidly. Should one application not produce a sufficient result, others may be resorted to, the number depending on the extent and locality of the ulceration, the facility with which the plug can be retained in position, etc. He has found applications of Sulphur equally effectual in destroying the micro-organisms that produce the foul impetiginous ulcers seen in children. Sulphur, like iodoform, says Mr. Laner, becomes active as a germicide—and is very considerably more powerful in its action than iodoform—only when in immediate contact with a raw surface, the living tissue causing it to form certain combinations with hydrogen and oxygen.—*Canadian Practitioner.*

Treatment of Chlorosis.—Doctor Frederick Scholz, of Bremen, instead of regarding the deficiency of iron or hæmoglobin, or even that of the red corpuscles, as the primary affection in chlorosis, states that contraction of the vessels is always present, as indeed was observed by Bamberger, Rokitansky, and Virchow; and this, he contends, is not to be regarded as a complication due to an altered condition of the blood, but as the primary condition which is followed by the morbid change in the blood. As a matter of fact,

the vessels are, he says, too full, or in the condition termed by the older physicians *plethora ad vasa*, the blood being—or becoming—abnormally serous. Long ago his attention was struck by the cold and livid condition of the skin in anæmic subjects, and he was led by this to employ hot baths, together with gentle friction, in the treatment, with the view of acting directly upon the skin, so as to improve the vitality and nutritiou generally. The success of his first attempts was so marked that he was encouraged to persevere in this line of treatment, and he has since had many opportunities of extending his experience with it. Hot baths diminish the plethora by relaxing the tension of the vascular system, which is high, quickening the circulation, and thus relieving the palpitation, dyspnœa, and other symptoms. In thirty cases where the distress of the patient was very great, Doctor Scholz has gone a step further and supplemented the hot bath by venesection. Paradoxical as this treatment may appear, it was followed by marked benefit, and if the theory of the pathology of chlorosis above mentioned be correct, there can be little doubt that the novel line of treatment practiced is justifiable.—*Provincial Medical Journal.*

Action of Ephedra Vulgaris and Ephedrine.—Professor Bogoslowski, before the Society of Russian Physicians of Moscow, declared *Ephedra vulgaris* and its alkaloid *Ephedrine* belong to the group of cardiac remedies, the representative of which is caffeine: They influence especially the motor apparatus of the heart, very probably the cardiac muscle itself, and exert a certain action upon the vaso-motor centre and upon the peripheral vascular system: The toxic dose is rather large—a fact which increases its analogy to caffeine: The negative results reported are easily explained by the small doses employed.

The active dose for man is the same as that of caffeine. The best preparations for use are the fluid extract and the hydrochlorate of the alkaloid, and both preparations should be kept in tightly closed vessels in a cold place, as otherwise they readily deteriorate. On account of the pupillary dilatation, which does not long continue, Ephedrine might, in certain cases, be substituted for atropine.—*La Médecine Moderne.*

Cleft Palate.—If the patient suffers from enlarged tonsils, these should be removed and the surfaces permitted to heal before the operation for cleft palate is attempted:

Large ulcers which are likely to exist in the roof of the nose should be treated prior to performing the operation, because their presence is almost certain to cause an infection which will prevent union:

The patient should have decayed teeth filled or removed for the same reason:

He should be free from cough at the time of the operation:

It is exceedingly difficult to operate in children less than twelve years old, and the after-treatment is almost impossible:

No matter how perfect the result of the operation may be, it is always necessary to follow this with systematic instruction in speaking. Mothers of such children are usually willing to sacrifice any amount of time, and if taught how to instruct the patient they will usually obtain very satisfactory functional results.—*Chicago Clinical Review.*

An Ideal Napkin.—This is made from cheesecloth and cotton, both baked so as to be rendered sterile. A square is cut from the cheesecloth, nine by nine inches, folded over, and a piece of absorbent cotton of the same size (four and a half by nine inches) is placed between the folds. In this manner is prepared in the simplest possible way a compress available for receiving either the menstrual flow or the post-partum discharges, which is readily applied and which adheres closely when the subject is in the semi-recumbent position. Before applying afresh, the external genitals and the vulva should be bathed with warm water. It will not be amiss to give two warm vaginal douches, by means of a suitable syringe, every day. Should any odor be noticeable, the compress may be dusted with powdered boric acid. The addition of a little Euthymol to the water for bathing adds materially to comfort.—DOCTOR ADEE.

Hydrastinine in Uterine Hæmorrhage.—According to Kallmorgen, who has treated during two and a half years one hundred patients with Hydrastinine, the best results are obtained in the cases of hæmorrhage following hæmatocele, 100 per cent. being cured; in simple menorrhagia, eighty-five per cent.; in hæmorrhage after abortion, eighty-three per cent.; and in hæmorrhage dependent upon disorders of the tubes and ovaries, seventy-five per cent. Less satisfactory was the treatment of chronic endometritis, and little or no influence of the drug could be observed in cases of hæmorrhage during pregnancy, or arising from myoma and carcinoma. The remedy was administered by the mouth in the form of pill, the dose varying from one-

half to one grain three times daily. The by-effects were only slight—occasional stomach-ache or nausea. No other therapeutic treatment accompanied that with Hydrastinine.—*Medical Chronicle.*

Milk Diet in Typhoid Overdone.—Da Costa thinks the exclusive milk diet is a source of mischief rather than good, and recommends three parts of milk alternated with one of broth. He, however, evidently does not recognize the fact that the latter has scarcely any food value, the little extract of meat it contains acting solely as a stimulant, and, moreover, with a great tendency to cause flatulence. It has on several occasions been pointed out that whenever curd can be seen in the motions too much milk is being given, and it may even indicate that it is not being digested at all. It is best replaced by white of egg beaten up and largely diluted with water: in this way can be introduced any requisite amount of real food, and in the blandest and most readily digestible form; it leaves no solid residue, and can cause neither diarrhœa nor gaseous distention.—*Provincial Medical Journal.*

On the Action of Glycerin.—Glycerin is not a fatty substance, with which it has been confounded; nevertheless, from a therapeutic point of view it approaches such; from a chemical point it is an alcohol. Its physiological properties resemble those of fatty bodies—*e.g.*, its respiratory combustion. Introduced into the economy it is completely absorbed, and cannot be recovered from the blood; it has, moreover, a laxative action, whilst that of alcohol is costive. In a large number of experiments upon animals the injection of glycerin has never been seen to produce drunkenness; in diabetes no action has been traced upon the glycæmia; it diminishes the elimination of urea, and augments the expiration of carbonic acid; it counteracts the distaste for food in diabetics, and its action is upon other symptoms, not upon the formation of sugar.—M. CATILLON, in *Le Progrès Médical.*

Chekan.—It has been my privilege during the past winter to use the drug in several cases, in persons ranging in age from sixty to eighty years. It seems to be particularly adapted to those conditions following an acute inflammation of the air-passages, which take on the character and symptoms (except the elevation of the temperature) of phthisis pulmonalis in younger subjects. I usually prescribe the fluid extract in half-drachm doses, from four to eight times a day in a little simple syrup, or in the fluid extract of liquorice (which quite completely disguises its objectionable taste and at the same time acts favorably upon the inflamed mucous surfaces). It is especially beneficial in purulent bronchitis, and I have found it to act nicely in all chronic coughs, particularly when the bronchial passages *only* are involved. I would not use it in phthisis pulmonalis.—*Chicago Medical Times.*

Eucalyptus in Acute Coryza.—Doctor Griaznoff says that the inhalation of Eucalyptus affords the best means for cutting short an acute attack of cold in the head, provided treatment is early—that is, as soon as sneezing and watery discharge appear. The patient should tie a knot in his handkerchief, freely moisten it with Eucalyptus, and then energetically inhale until the symptoms disappear completely. When the inhalation is resorted to within an hour or so after the first symptoms, the affection is usually cut short in from ten to thirty minutes. For those persons who dislike the odor of eucalyptus, add one-third peppermint oil, which increases the rapidity of the "cure." In children, several drops of the mixture should be sprinkled over the pillow.—*Novasti Terapii.*

Chloral Hydrate for Hæmoptysis.—Having in view the reduction of the pressure in the pulmonary circulation, Pal (*Centralblatt für die Gesammte Therapie*) employed Chloral hydrate in doses of from fifteen to thirty-five grains, by enema, in the treatment of the hæmoptysis of pulmonary tuberculosis, selecting young adults with healthy hearts. In some cases the hæmorrhage ceased or diminished in from half to three-quarters of an hour, sometimes recurring after a varying interval. In a number of instances the administration was repeated, sometimes in a prophylactic way even when there was no bleeding. Morphine and codeine may possibly give as good results, and the former certainly has the additional advantage of subduing cough.—*Medical News.*

Ustilago Maydis as an Ecbolic.—Doctor Viktorin Gruzeff, in *Vratch*, as the result of prolonged experiment arrives at the following conclusions:

Maize Ergot is a most valuable uterine stimulant, and can be successfully resorted to in all stages of labor. Its effect becomes quickly manifest, usually within twenty-five or thirty minutes, never later than forty, the

pains induced being of a physiological character—that is to say, they represent normal clonic contractions interrupted by regular pauses. The parturient tolerate Corn Ergot in an excellent way; and the remedy does not exhibit any harmful influence on the fœtus, nor does it in any way interfere in the normal course of puerperal involution of the uterus.

Treatment of Gall-Stones.—Eight years ago I attended a lady who had suffered for years from attacks of bilious colic, recurring sometimes as often as once a month, attended with excruciating pain. I gave fluid extract *Dioscorea villosa* (Wild Yam) in twenty-drop doses four or five times a day, continuing for about four weeks. She has ever since remained entirely free from the trouble. I have since used the same remedy in several cases with the same gratifying results, and am inclined to look upon it as a specific. During the attack I give pilocarpine hypodermatically to relax spasm and flood the duct with mucus; that failing, I administer morphine and atropine.—DOCTOR GEO. MITCHELL, in *Medical World.*

Treatment of Acute Psoriasis.—In the treatment of acute psoriasis arsenic is to be avoided, but Iodides are to be given in large doses, the beneficial effect being due in part to their diuretic influence. Wine of Antimony is to be used with great caution. Turpentine, when the kidneys are healthy, is sometimes of service, apparently because of its well known effect in producing contraction of the blood-vessels and thus lessening hyperæmia. In the local treatment a point of cardinal importance is the careful removal of the scabs and the application to all portions of the lesion of an antiparasitic medication.—DOCTOR CROCKER, in the *British Medical Journal.*

Management of Measles.—The danger in measles and whooping-cough lies in the complications, *e.g.*, bronchitis and pneumonia, which may be coincident with the eruption on the skin and on the mucous surface of the bronchi and pulmonary vesicles—bronchopneumonia secondary upon measles or whooping-cough will occur either from lack of judicious treatment, or from the carelessness of the patient. Treatment should consist in keeping the patient in a warm room, and administering repeated full doses of acetate of ammonia, which is eliminated by the lungs and destroys the microbes.—DOCTOR COHEN, in *Journal de Médecine de Paris.*

Lactophenin.—Professors Prousk and Landowski have been experimenting with Lactophenin, which resembles phenacetin in structure, but contains a lactic instead of an acetic acid group. It is described as a white, tasteless powder, soluble in 330 parts of water, while phenacetin demands 1,400 parts. The dose is from ten to fifteen grains, and forty-five grains may be given in a day. It is claimed that it is as rapid and as energetic in its action as antipyrin, and that it can be taken by those who cannot take the latter. Further, that whilst in ten-grain doses it is anti-neuralgic, in fifteen-grain doses it has hypnotic effects.—*Medical Chronicle.*

Rhus Aromatica.—Doctor S. M. Worthington, in a paper before the Kentucky Medical Society, declares in nocturnal enuresis "this remedy is reasonably secure. Ten drops of the tincture in water, before meals and at bedtime, for two weeks, intermitted for a week, again exhibited the fourth week, has been my usual method of administration. There are cases that require longer, others a shorter course of treatment, but the above has ordinarily proved sufficient. Intermissions seem to add to the effectiveness of the remedy, and it is important it be given for a few days at intervals after the cure is seemingly complete."

Barber's Itch.—Clip the beard very close, and apply Lassar's paste, made as follows:

℞ Powdered starch, Zinc oxide, ää 2 drachms.
Salicylic acid, 15 grains.
Vaselin, 1 ounce.
M.

Before application, the crusts should be removed by soaking with oil and washing with soap and water.—*Southern Medical Record.*

[A far more efficacious application is an ointment containing three per cent. of pure sulphuret of potassium.—ED.]

Impotence.—When due to dilatation of the spermatic cords resulting from excessive masturbation, Doctor Floyd Royster recommends one teaspoonful of Normal Liquid Ergot three times a day, to so contract the cords that they will become fixed. Also bromides to quiet nervous excitement; a general tonic of iron and arsenic; gentian and the mild chloride of mercury to keep bowels gently open. A case he had under this treatment continuously for two months, completely recovered and "is quite a happy man to-day, contemplating matrimony."

Medical Progress.

SURGERY AND SUPERSTITION.—To those unversed in the history of surgery it may come as a surprise that many of the appliances commonly regarded as the inventions of yesterday are but the perfected forms of implements long in use. It is astonishing to find amongst the small bronzes of the National Museum at Naples, bistouries, forceps, cupping vessels, trochars for tapping, bi-valvular and tri-valvular specula, an elevator for raising depressed portions of the skull, and other instruments of advanced construction which differ but little from their modern congeners. The invention of such instruments, and the skill displayed in their construction, presuppose a long period of surgical practice. We find, accordingly, that four hundred years before our era Hippocrates was performing numerous operations bold to the verge of recklessness. Thus, he was accustomed to employ the trepan, not only in depression of the skull or for similar accidents, but also in cases of headache and other affections to which, according to our ideas, the process is singularly inapplicable. Strangely enough, the Montenegrins are, or recently were, accustomed to get themselves trepanned for similar trifling ailments, and it is probable that in both instances the procedure was but the surviving custom of primeval ages. That such operations were then performed, Doctor Robert Munro, in an admirable article upon prehistoric trepanning, conclusively shows. His paper records a strange blending of the sciences of medicine and theology in their initial stages; for, whilst he makes it clear that during the neolithic period a surgical operation was practiced (chiefly on children) which consisted in making an opening through the skull for the treatment of certain internal maladies, he renders it equally evident that the skulls of those individuals who survived the ordeal were considered as possessed of particular mystic properties. And he shows that when such individuals died, fragments were often cut from their skulls, which were used as amulets, a preference being given to such as were cut from the margin of the cicatrized opening. The discovery arose as follows: In the year 1873 Doctor Prunières exhibited to the French Association for the Advancement of Science an oval cut from a human parietal bone, which he had discovered in a dolmen near Marvejols, imbedded in a skull to which it had not originally belonged. His suggestion that it was an amulet was confirmed on the discovery of similar fragments of bone grooved or perforated to facilitate suspension. When Doctor Prunière's collection was examined by Doctor Paul Broca, he pointed out that that portion of the margin of the bone which had been described as "polished" owed its texture to cicatricial deposits in the living body, and that, where these were wanting, death had ensued before the pathological action was set up, or the operation had been post-mortem.

These discoveries led to widespread investigation, and to the production of trepanned skulls from Peru, from North America, and from nearly every country of Europe. These were not restricted to any particular race or period, but ranged from the earliest neolithic age to historic times, and included skulls of dolichocephalic and brachycephalic types.

The method of conducting the operation appears to have been to gradually scrape the skull with a sharp flint, though there is occasional evidence of its use in a sawing manner such as obtained when the ruder implement was superseded by one of metal. The process was almost exclusively practiced upon children, probably on account of the facility with which it could then be accomplished, and possibly also as an early precaution against those evils for which it was esteemed a prophylactic. What the dreaded evils were, was suggested by Doctor Broca, who, whilst he believed that the operation was primarily conducted for therapeutic purposes, saw behind these the apprehension of a supernatural or demoniacal influence. Readers of Lenormant's "Chaldean Magic" will remember "the wicked demon which seizes the body, which disturbs the body," and that "the disease of the forehead proceeds from the infernal regions, it is come from the dwelling of the lord of the abyss." With such an antiquated record before us, it is by no means an extravagant theory to broach, as Doctor Broca has done, that many of the convulsions of childhood, which disappear in adult life, were regarded as the result of demoniacal possession. This being granted, what more natural than to assist the escape of the imprisoned spirit by boring a hole in the skull which formed his prison? When a patient survived the operation he became a living witness to the conquest of a fiend, and it is comprehensible that a fragment of his skull taken after death from the very aperture which had furnished the exit would constitute a powerful talisman. Chaldean demons, as we know, fled from representations of their own hideous forms; and if they were so sensitive on the score of personal appearance, others may have dreaded with equal keenness the tangible record of a previous defeat. It is certain that to cranial bones medicinal

properties were ascribed, a belief in the efficacy of which persisted to the dawn of the eighteenth century; whilst, in recent years, such osseous relics were worn by aged Italians as charms against epilepsy and other nervous diseases. When once the dogma was promulgated that sanctity and a perforated skull were correlated, fond relatives might bore the heads of the departed to facilitate the exodus of any malignant influence still lingering within, and to ensure them, by the venerated aperture, a satisfactory position in their new existence. For similar reasons the bone amulet was buried with the deceased, and sometimes it was even placed within his skull. Doctor Munro considers it hard to say for what purpose such an insertion should have been made, but, arguing from his data, the practice does not appear to me difficult of explanation. He has shown that disease was the work of a demon imprisoned in the skull; that this demon was expelled through the trepanned hole, the margins of which were thereby sanctified for talismanic purposes. The unclean spirit was gone out of the man, and observation showed that, during the man's earthly existence, he did not return; but what guarantee was there that in the dim unknown region to which the deceased was passing, the assaults of the evil one might not be renewed—that he might not return to his house whence he came out, and, with or without other spirits more wicked than himself, enter in and dwell in the swept and garnished abode? Surely, with such a possibility before them, it was the duty of pious mourners to offer all the protection that religion could suggest, and to defend the citadel with that potent amulet which recorded the previous discomfiture of the besieger. The post-mortem trepanning may have been such a pious endeavor to carry sacramental benefits beyond the grave, as induced the early Christians to be baptized for the dead; and if there be truth in the deductions which have been made from the evidence, they point not only to a belief in the supernatural and in the existence of a future state, but also to that pathetic struggle of human love to penetrate the kingdom of death, which has persisted from the death of "Cain, the first male child, to him that did but yesterday expire."

The possibility of reasonably making such deductions from a few decayed bones is a remarkable proof of the progress of anthropological science. Should any readers regard these deductions as unwarranted, they must remember that their value is dependent upon a series of facts which can here be but very imperfectly reproduced.—FRANK R. FOWKE, in *Nature*.

ANIMAL EXTRACTS.—It is to be regretted that the introduction of animal extracts has been attended with so much quackery. Doubtless marked and beneficial results have been obtained from the administration of thyroid extract in some cases of myxœdema, but it must be remembered the thyroid is a secreting gland, which has been shown experimentally to have a direct effect in the production of this disease, and one can easily understand that if through a deficiency in quantity or quality of its secretion a pathological condition arises, the administration of an extract of the gland, by supplying the deficit, might bring around a return to the normal condition of affairs. This may warrant its use in diseases evidently arising from affections of the thyroid gland, but its employment in lupus, internal tuberculosis, cancer, etc., as we have seen it recommended, is, in the light of our present knowledge of pathology and bacteriology, most unscientific, and can only have the effect of bringing the remedy into disrepute. The action of nervine, cerebrine, cardine, and numerous other "*ines*," is not supported by such scientific evidence, and it is to these we refer in speaking of quackery. As well might one attempt to restore an amputated leg by the use of *Crurine*, *Genuine*, and *Pedine*, as to expect cerebrine to form a new corpus striatum in the place of one that has been ploughed up by the blood from a ruptured middle cerebral artery. A very unpleasant and disgraceful feature of this subject is the way in which these extracts are being advertised, not only in medical journals, but in the public press.

The pendulum of medical thought is seldom at rest, and as with almost every new remedy, so will it probably be with thyroid extract: received with open arms as a panacea for almost all ills; rejected as quickly and fervently when found unqualified for the position to which it was assigned; and eventually, after serving a long apprenticeship, become installed again in general confidence, but with very much limited functions. —*Canada Lancet*.

PRODUCTION OF GLYCOSURIA IN ANIMALS BY MEANS OF PSYCHICAL EXCITATIONS.—M. P. Gibier has communicated the following observation to the Academy of Sciences: A bitch, aged four years, was selected for experiment while passing the day with other dogs belonging to the laboratory in the yard of the institute. Its urine, examined for several consecutive days, showed no trace of sugar; it produced no deviation of light.

The animal was of a very affectionate, timid, and jealous disposition. When it was imprisoned alone all day in its cage it whined continually, and its cries became terrible when it saw the other dogs enjoying their liberty. During three days of imprisonment the urine gave no reaction; on the evening of the fourth day it contained 5.55 per 1000 of sugar. The glycosuria persisted during the captivity. The day after it was set at liberty the sugar disappeared from the urine. The experiment was repeated six times upon this dog, with the same result—that is, at the end of four, three, or even two days of imprisonment, glycosuria appeared, and soon vanished when the dog was set free to join its companions. The quantity of sugar increased to 6.66, 8.88, and, at another time, to 25 per 1000—a high proportion in comparison with that generally found in animals suffering from diabetes. It was impossible to make a comparison in regard to polyuria, polydipsia, or polyphagia. Glycosuria did not make its appearance when the animal was imprisoned with a companion. The same experiment made with an apathetic dog was without result. These facts demonstrate that, as in man, certain animals, under the influence of emotional excitement, exhibit glycosuria.—*Le Bulletin Médical.*

THE ACT OF COPULATION.—Copulation is the act by which the male and female bodies are sexually united. Under normal circumstances it is preceded by sexual appetite or desire. All its phases, perhaps with the exception of the desire, seem to be much less pronounced in woman than in man. The clitoris, the vestibulo-vaginal bulbs, and perhaps the inner genital organs, enter into a state of erection. Friction between the male and female copulative organs causes a peculiarly pleasurable sensation, which ends in orgasm—the acme of nervous excitement,—which seems to be weaker in the female than in the male, and altogether absent in some women, who nevertheless are capable of being impregnated. The orgasm is accompanied by an ejaculation of a mucous fluid from the glands of the vulva. If orgasm is less pronounced than in the other sex, it leaves far less feeling of exhaustion than in man. It is followed by relaxation which at any time may again give place to new excitement and erection. This difference is easy to understand when we take into consideration the difference between the fluids ejaculated, and the profound shock sustained during orgasm by the central nervous system in the male. The disturbance of these normal conditions, which makes copulation painful or impossible, is called dyspareunia, and may be caused by many different affections or malformations of the genitals or other organs.—*The Medical Annual.*

DOUBLE URETER.—M. Ardin-Delteil presented to the Society of Practical Medicine and Surgery of Montpellier a specimen taken from a man, forty-five years of age, who had two kidneys in normal position. The left (which was the longer and larger) presented upon its anterior surface, at the junction of the upper and middle thirds, a slight depression, more marked toward the outer border of the organ, and also two ureters. One was normal and emerged at a point corresponding to the normal hilum; the other, smaller, appeared to penetrate the normal parenchyma at a spot near to the upper extremity; there were two hilums, the second and upper one admitting the supernumerary duct and some small vessels. The two canals ran side by side from near their origin, and so continued to the fundus of the bladder. The lesser ureter entered the bladder at a point situated $\frac{1}{33}$ inch within, and $\frac{1}{3}$ inch in front of, the point at which the normal ureter terminated. There was no communication between the two conduits. The supernumerary ureter had no pelvis, properly so called.—*La Médecine Moderne.*

PHYSIOLOGY OF THE SPLEEN.—Vulpius declares that histological study of the normal splenic tissue shows the possibility but not the certainty of the entrance of colorless cells into the circulation from the spleen; it is evident that the red cells undergo disintegration in the spleen, but there is no ground for assuming that they are formed in the spleen: Comparison of the blood of the splenic artery and vein shows no positive difference: In acute general anæmia the spleen shows signs of increased activity: Removal of the organ causes a transient decrease in the number of red, or increase in the number of white, blood-cells: The thyroid gland has no vicarious relation to the spleen: Lymph-nodules and the bone-marrow acquire an increased blood-forming activity after extirpation of the spleen: Regeneration of blood is retarded after hæmorrhage in persons without spleens.

These conclusions, though contradicting certain accepted teachings, offer little that is new, but are of value in that they are based upon accurate scientific data, and corroborate much that has already been done. Unfortunately our knowledge of the physiology of the spleen is still left in a state of confusion. —*Beiträge zur Klinischen Chirurgie.*

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Original Articles.

YELLOW FEVER.*

BY DOCTOR JOAO VINCENTE TORRES HOMEM.

(*Continued from page 623.*)

VI. The third stage of yellow fever is also denominated the *hæmorrhagic* and the *ataxo-adynamic* stage; hæmorrhagic because it is in this stage that are manifested the bleedings of the character assigned by pathologists to passive hæmorrhages — dependent on the change of the blood-crasis, the fibrin and red globules being the chief elements compromised in this change (hæmophilia); ataxo-adynamic because it is in this stage also that appear the profound disorders of innervation which constitute ataxia and adynamia. To give to the third stage of "American typhus" one only of these two denominations is to create a hiatus in medical nomenclature, for this stage may occur without a single hæmorrhagic symptom being observed, just as, again, it may exist without a single ataxic or adynamic phenomenon presenting itself. There are cases where the hæmorrhagic form manifests itself isolated, as there are where the same happens with the ataxo-adynamic form. There are cases—and these are the more numerous—where the two forms are associated, and both concur to the extreme gravity of the disease.

It is in the third stage that this malady assumes its distinctive characteristics, and becomes recognizable and patent to the eyes of the least experienced. In the hæmorrhagic form various bleedings are observed, which take place by the natural openings—by the corpus mucosum of the skin, and by solutions of continuity existing in the external tegument, such as wounds, ulcers, leech-bites, etc.; the patient is brought to an advanced degree of prostration in consequence of the abundance thereof, and the blood which he loses is black, diffluent, hardly coagulable.

The first hæmorrhage which ordinarily manifests itself, and is rarely wanting, is gastric — gastrorrhagia, or hæmatemesis — revealed under the form of black vomit. In some cases, as soon as the third stage appears, even though the patient has not suffered from emesis in the first and second, black vomit occurs at once, without any other sort preceding; this is what takes place when the disease assumes its maximum gravity, when it tends to terminate fatally.

At other times, when this stage appears, the patient who until then has not vomited begins to reject the medicines prescribed and the water drank; next, the matters thrown up are composed of greenish-colored bile, mixed with the fluids contained in the gastric cavity; later on appear some blackish particles suspended in a certain amount of bilious fluid; these particles keep growing gradually more abundant, take on the aspect of tobacco-juice or coffee-grounds, and settle in the bottom of the receptacle. When this takes place—that is, when black vomit appears after the appearance of the watery and bilious vomiting, as it commonly does—the disease is much less grave.

The black matter ejected does not always present the pulverulent aspect to which I have just referred, and it is not always expelled mixed with greenish fluid. In some cases, whether or not there have been bilious vomitings, the black vomit consists of a homogeneous fluid, exactly like writing-ink; in others there is a certain amount of blood, blackish, but perfectly appreciable even by those who do not belong to the medical profession—in this latter case the amount of blood is almost always very great, and the hæmorrhage assumes a threatening character from the abundance of its volume.

I had occasion to observe two patients in the epidemic of 1873 in whom the gastrorrhagia

* Translated by Surgeon George P. Bradley, U. S. N.

was manifested thus; the vomitings much resembled those of a person who, suffering from advanced cirrhosis of the liver, is the victim of a rupture of the small gastric veins consecutive to the enormous distention they undergo (as also do the veins of the whole abdominal system, in consequence of the obliteration of a great number of the intra-hepatic ramifications of the vena porta). Chocolate-colored vomitings are commonly observed, preceded by mucous and bilious vomiting.

The color and appearance of the vomit of the third stage depend upon the quantity of blood extravasated in the gastric cavity, and on the amount of bile with which it is mingled. Although black vomit is a very constant symptom, so much so as to give a name to the disease, in some cases it is not observed at all: setting aside the ataxo-adynamic form of the third stage, in which entire absence of any hæmorrhage is not rare, one meets with patients who fall victims to multiple hæmorrhages without once having had black vomit.

These cases represent the minority, and either the stomach is really spared by the hæmorrhagic flux, or, what is more frequent, the extravasation of blood takes place in the gastric cavity, but the latter does not expel its contents; these contents at times remain in the interior of the organ, greatly distend it, and are found in large amount on autopsy; again, they pass the pylorus, enter the intestines, and are discharged in the evacuations. Out of forty-two patients in the third stage of yellow fever whom I observed during the epidemic of 1873, black vomit failed to appear in five, of whom two presented the hæmorrhagic form and three the ataxo-adynamic.

Besides not being infallible, black vomit is assuredly *not* the gravest symptom of yellow fever, as some epidemiologists still think. In Rio de Janeiro, whether during the epidemic of 1850, according to the opinion of the Barons de Petropolis and Lavradio, in the epidemic of 1873, or during the small intermediate epidemics, black vomit has been of all the phenomena of the third stage that which most easily and promptly yielded to the use of therapeutic means. In this respect the observation of some foreign physicians is in perfect agreement with that of the Brazilian: Louis observed black vomit in two-thirds of the seizures in the epidemic at Gibraltar; Valentin saw many recover who had black vomit, in the various epidemics at which he was present in North America.

There have been and still are those who deny that the black matter of the vomit is composed of blood; some believe it is due to cholepyrrhin, or the dark coloring principle of the bile. Notwithstanding, nothing is easier than to prove that this black matter is only slightly altered blood—containing red globules in various stages of destruction, the detached hæmatin staining the serum—mixed with the fluids of the stomach in variable amount (hence the different appearance and color of the vomited substances). This may be readily demonstrated by chemical and microscopical examination of the vomited matter.

In proportion as the blood goes on extravasating within the stomach, the patient keeps vomiting, usually without much difficulty, hardly with any effort, feeling relieved immediately after, in spite of the supervening prostration. But there are cases where, in spite of the stomach's containing a large amount of fluid, vomiting does not occur easily; the patient experiences a terrible sensation of epigastric distress, becomes anxious and troubled, and only after several hours of anguish and torture expels the enormous contents of the gastric cavity, falling afterwards into profound collapse; and when the great distention of the stomach is due solely to the extravasated blood, the patient frequently expires at once after the vomiting, death being due either to the profuse hæmorrhage, to the loss of balance of innervation arising from the sudden discharge of a large amount of fluid distending the stomach, or to asphyxia produced by the blood falling into the respiratory passages. In the hospital of Nossa Senhora d'Ajuda, I happened to be present at the death of a captain of the French Navy, a few minutes after a copious black vomit which drenched his garments and spattered the bed-linen and the wall. Up to that moment the poor young man had not vomited at all; the stomach was full of fluid, as could be easily verified by percussion; there was saffron yellowness of the

skin, and anuria of twenty-four hours' standing. He had been in horrible distress for a quarter of an hour; endeavored to get out of bed, but the prostration of his strength prevented; he wished to sit up, and not even when supported by two stout men could he maintain himself erect; with both hands pressed against the epigastrium, he strove to excite vomiting; he gesticulated wildly, and still had no delirium. Suddenly he raised his head from the pillow, opened his mouth, and from it poured a great wave of black and fœtid blood, when he fell inert upon his right side; in this attitude a second spurt of blood came forth, but weakly—it seemed rather a regurgitation than a real vomit; his face, neck and chest were inundated; the patient assumed the dorsal decubitus, and after a space of seeming tranquillity had a violent hiccough, with which life was extinguished.

Next to bleeding from the walls of the stomach, enterorrhagia and epistaxis are the most frequent hæmorrhages in the third stage. At the same time the patient has black vomit, and passes by rectum a matter analogous in color and appearance to that rejected by the stomach. There are cases in which the bloody and blackish evacuations are manifest only after the vomiting ceases. At other times the losses of blood occur exclusively by the bowels, without the patient having had a single black vomit; but this is an exception to the general rule. The patient may have a large number of bloody stools, with or without vomiting of the same nature, or may have a single loss of blood by the intestine, very abundant, and followed at once by death; this I had occasion to observe in two cases during the epidemic of 1873: In one instance the sufferer, after having had black vomit twice, was attacked by very grave ataxo-adynamic symptoms. When everything indicated manifest improvement, the vomiting no longer appearing, she asked for the close-stool, and, after passing per rectum about a quart of very black and fœtid blood, a profuse cold and clammy sweat supervened and she almost immediately died: In the other case the patient, a young Portuguese, had black vomit several times, which yielded to the use of ergotin in sulphuric lemonade, a blister to the epigastrium, and ice; the jaundiced color appeared, and some delirium at night; the urine was scanty and contained much albumen. In this condition a violent colic seized him in the region of the umbilicus, that lasted about a quarter of an hour; when it ceased he had a large bloody stool in bed, and a few moments later expired.

The black evacuations depend either upon genuine enterorrhagia—that is, upon an extravasation of blood taking place in the bowel itself—or upon the passage of bloody fluid from the stomach into the intestinal canal. In some cases the matters passed by stool are composed of bile, fæces, and blood; in others blood only is observed, more or less altered and fœtid.

Epistaxis in the third stage comes either after black vomit or together with it—the latter is with us the general rule; sometimes, exceptionally, it is the first hæmorrhage to manifest itself. It differs essentially from that noticed in the first stage, as already stated; the blood that flows from the nasal fossæ is dark and different, and, far from causing relief, adds to the prostration of strength.

When the hæmorrhagic flux is very profuse, part of the blood flowing through the posterior opening of the nasal fossæ may be swallowed, and later be rejected by the stomach. I have likewise observed cases in which the epistaxis, becoming profuse and resisting hæmostatic remedies, directly threatened the patient's life. I saw in consultation a boy of fourteen years, recently arrived from the province of San Paulo, whose death was in great part due to a nasal hæmorrhage that had for thirty-six hours resisted a large number of therapeutic means, and was only stanched after tamponing the nasal fossæ with Belloc's sound.

Stomatorrhagia is also frequent in the third stage, and at times appears prematurely, much before the first black vomit; but again, and more commonly, manifests itself later. The gums, tongue, and inside of the cheeks are the points ordinarily supplying the blood of stomatorrhagia, and the patient's breath becomes foul and fœtid, owing to the change undergone by the blood extravasated.

In a patient who presented the hæmorrhagic type in a very marked manner, and subsequently recovered, stomatorrhagia was most profuse and stubborn; black blood poured

from the gums, flowing outside and spotting the chin, neck, and chest. In some cases stomatorrhagia is very moderate; the small quantity of blood which flows from the gums or tongue coagulates at once, and clots cover these organs to a variable extent.

Hæmaturia, which is of very frequent occurrence in the bilious remittent fever of the tropics, is rarely observed in yellow fever; in 1873 I met with it but once, and in 1850, according to the opinion of the physicians who described that epidemic, it was present in only a small number of cases. I observed the same as regards hæmoptysis. A singular and noteworthy fact is, there is not a single case of yellow fever with us that terminates fatally, in which autopsy does not reveal the existence of great pulmonary congestion, and often the presence of one or more hæmorrhagic foci in the lung; yet pneumorrhagia, betokened during life by expectoration of blood, is so excessively rare that I have yet to observe the first case of the kind. I know that my colleagues have seen some few patients, a very small number indeed, in whom hæmoptysis appeared, and I cannot and do not dispute the exactness of these facts, which however in no respect invalidate my assertion.

Subcutaneous hæmorrhages, revealed in the form of petechial and ecchymotic spots, are very frequent; they were almost universal in appearance in the epidemic of 1873. In persons of very fair complexion, the numerous spots which manifested themselves all over the cutaneous surface, of various size and shape, gave to the exterior of the body a very significant marbled appearance, especially when the yellow coloration was not yet present.

Metrorrhagia is often the first hæmorrhage manifest when yellow fever reaches the third stage. It passes unnoticed by the physician at times, for patients consider the loss of blood to be due to the catamenial flow, and it is only when it appears at a time very near the last menstrual period that attention is called to it; this happened with a French woman recently arrived, whom I saw in consultation. Much before the first bilious vomit, much before the manifestation of ataxic symptoms which were later on associated with the hæmorrhagic, this young woman, who had menstruated regularly a week before, was surprised by the appearance of a profuse flow from the vagina. This continued thus for three days, and only ceased on the evening of her death.

I have not observed a single instance of hæmorrhage from the auditory canal and the inner angle of the eyes, of which some foreign authors speak, but am aware that in 1873, in the wards established in the convent of Santo Antonio to receive the poor attacked by the epidemic, such were observed in three instances. Neither have I yet seen the bloody sweats reported by some epidemiologists, nor has any colleague with whom I have conversed observed such a phenomenon.

Albuminuria, which is rarely present in the first stage, and which in some cases manifests itself in the second, constitutes in the third a very frequent, almost an infallible, symptom. When the renal secretion sensibly diminishes, that which is passed appears dark, turbid, and saturated with albumen, as I have had occasion to remark at various times; exaggerated scantiness is always a very grave sign, since this symptom is ordinarily observed in cases terminating fatally. Albuminuria does not, however, appear to exercise the slightest influence upon the course and termination of the disease, as I have observed many recoveries where the patients lost much albumen, and likewise many deaths where the loss of albumen was moderate.

Anuria is a frequent symptom in some epidemics, and rare in others; in 1873 it was very frequently manifest. It is a very grave symptom, indeed in my opinion the most dangerous of all, since I have never succeeded in saving a single patient in whom it was present. In thus expressing myself, I refer to the complete and absolute suppression of the urinary secretion, lasting over twenty-four hours.

I know that some cases recover who have ceased to urinate for periods of six and twelve hours, and I have had such. But when the renal glands for one complete day fail to separate from the blood the urea accumulating there by reason of organic nutritive combustion—when upon the profound dyscrasia of the blood which characterizes the basis of the disorder, uræmic poisoning

supervenes—it is rare, *very rare*, for the patient to regain health.

In the epidemic of 1873 I treated nineteen patients who presented anuria among the symptoms of the third stage, and all succumbed in a short time. In some cases a great diminution of the urinary secretion was noted during the first stage, becoming gradually more and more marked until anuria appeared in the third stage. But in other instances the secretion of urine ceased suddenly as soon as the first ataxo-adynamic phenomena were manifest.

There is to be observed, at times, another symptom, paralysis of the bladder, which hinders the voluntary and spontaneous dis charge of the urine, and demands the use of the catheter. To distinguish cases of anuria from those of cystic paralysis, there are two means—percussion, and the catheter. When there is true anuria, percussion of the lower portion of the hypogastrium reveals entire emptiness of the cystic viscus, and the catheter fails to extract so much as a single drop of urine. When there is paralytic inertia of the muscular coat of the bladder, secretion continuing to be performed, this reservoir is constantly becoming more and more distended until is produced a marked prominence in the hypogastric region, that yields to percussion a dull *humoral* sound; all the accumulated urine may then be withdrawn by the catheter. Paralysis of the bladder is, however, an infrequent symptom in yellow fever; I have observed it in four cases only, those in the epidemic of 1873.

After the third stage is fairly declared, the jaundiced color of the skin ordinarily becomes intense and general, yet it is often only upon the very close approach of death that this phenomenon is fully manifest; sometimes, indeed, it makes its initial appearance after death. Before this stage, it is true, some yellowness is often observed in the sclerotic conjunctiva, and skin of the chest and thighs, but almost never does the color become very deep and invade the entire surface of the body. While the reddish-yellow color, noticed in certain regions in the first stage, may be rationally explained by the changes undergone by the blood stagnated in the capillaries, the jaundiced yellowness of the third stage does not admit of this explanation, as I shall make manifest a little further on.

VII. The hæmorrhagic symptoms I have just described are not invariably observed in all cases of yellow fever in the third stage. In many instances different symptoms present themselves, either entirely independent of hæmorrhages or mingled with them, but dominating the scene, and directly influencing the termination of the disease; these are the result of profound disturbance of the nervous system, and are the so-called ataxo-adynamic or typhoid symptoms. Delirium, partial convulsions, subsultus tendinum, carphologia, crucidismus, tremor of the tongue, coma, and hiccough: such are the phenomena ordinarily manifested either in their totality —which is very rare—or in their majority, attended by great prostration of strength, by profound adynamia. In many cases, together with these phenomena, black vomit and epistaxis are observed; in others there is entire absence of hæmorrhages. Among the ataxic symptoms presented by some, there is one which is an unfailing index of speedy dissolution, namely, a special disturbance of respiration, a sort of dyspnœa, which causes the patient to inspire by sucking in between his incompletely opened lips the air which is to reach his lungs, so that each inspiration is sibilant and noisy, as if the person were drinking in great gulps of some fluid. This symptom, proceeding from the respiratory system, denotes that the functions of the pneumogastric are deeply compromised.

The delirium of the third stage is generally mild; but there are cases in which the patient vociferates, screams, and commits acts of frenzy. Delirium often consists of continued lamentations, accompanied by great uneasiness; the patient gets out of bed, and lies down again; constantly shifts his pillow; does not allow the least examination, and cries out when he is crossed. At other times he is sleepy, and only raves when he is forced out of his sleep or coma.

Convulsions, although rarely manifested, have been observed, sometimes seizing a great number of muscles, sometimes seizing a certain group of muscles—those of the face, for example. I saw a patient of Doctor Freire's, a boy twelve years old, who, to-

gether with profound coma, presented very manifest convulsive movements on the right side of the face. He had previously had black vomit, epistaxis, and stomatorrhagia; these hæmorrhagic phenomena, yielding to therapeutic measures, were then replaced by the ataxo-adynamic phenomena. February 3d, 1878, there entered the hospital of Nossa Senhora d'Ajuda an Italian boy twelve years old, son of the master of the bark *Siffredi* who, as well as another son, had died in twelve hours in the same hospital, of yellow fever. This second son, after having had black vomit and epistaxis, was perceptibly improved; in spite of belonging to a vessel the complement of which had been almost all mown down in less than a week; in spite of coming from that ship, the unhealthful condition of which provoked the vehement complaints of the press, the lad seemed to be in a fair way to recover. The temperature had fallen, the tongue was good, the vomiting had ceased, albuminuria had moderated, and there was no delirium or coma. Suddenly, two hours after my visit, he was attacked by violent epileptiform convulsions, which lasted more than half an hour, terminating in death.

Hiccough is a very common symptom in the ataxic form of yellow fever, and ordinarily lasts many hours; it is prolonged at times during the entire third stage, and becomes intractable to all therapeutic agencies. In one patient whom I saw, the singultus persisted for the space of three days, and was so noisy that people in the same house could not sleep during the night on account thereof.

When the hæmorrhagic form is manifest in the third stage, the disease terminates in a few days, either by recovery or death; but when the ataxo-adynamic form is declared, the phenomena sometimes are rapidly precipitated and the patient expires at the end of twenty-four or thirty-six hours, at most at the end of two days, or else they progress slowly and the disease assumes the course and appearance of a typhoid—in which case, either death occurs at the end of the second week, or convalescence, doubtful and imperfect, is declared at the end of twenty-odd to thirty days.

All these symptoms of the third stage are usually accompanied by slight fever or complete apyrexia, or even by lowering of temperature. Sometimes, in the ataxo-adynamic form, cooling of the extremities is observed, with small, weak, and frequent pulse. General algidity is a phenomenon of excessive rarity, and I have only met with it, outside of the moribund state, in a single case.

The tongue presents various appearances: sometimes it remains large and moist, barely covered at the base with a thin coating of yellowish fur—this is the condition noted at the beginning of this period in the majority of cases; sometimes it becomes dry, red, and shiny, as commonly occurs in the typhoid form; or it seems split, is fissured, covered with blood-clots at some points, stained with blood at others—this is often met with in the hæmorrhagic form.

Prostration of strength, epigastric uneasiness or distress, insomnia, when there is not coma, multiple abscesses and parotitis, sometimes diarrhœa, sometimes constipation: such are the other symptoms observed in the third stage, the importance of which is altogether secondary if not entirely null.

VIII. There is in yellow fever a dyscrasia of the blood, determined by the miasm which infects the organism and produces the disease. This dyscrasia affects by preference the fibrin and red globules: the latter are changed in their morphological condition; the former loses great part of its plasticity, becomes soft, friable, and barely coagulable. The numerous and varied hæmorrhages noted in the third stage of the disease are easily explained by this dyscrasia.

The jaundice of the third stage does not recognize for cause simply the modifications occurring in blood stagnated in the capillaries; this cause is powerfully influential, it is true, but, admitting that in this stage the liver is profoundly and extensively altered in its anatomo-physiological characters, as the observations of Doctor Costa Alvarenga demonstrate, confirmed by my own and those of other Brazilian physicians, I cannot fail to concede an important part in the mechanism of the icterous color to the hindrance suffered by the bile in its course within the hepatic gland, as well as to the retention in the blood of the principles forming the biliary secretion.

In yellow fever, where there is so grave

and profound a change in the crasis of the blood, where congestions appear active in the first stage and passive in the third, albuminuria finds an easy explanation, whether we admit the anatomical doctrine (*renal lesion*) or the chemico-physiological *alteration of the blood*. In the third stage especially, in which the loss of albumen in the urine is so frequent and abundant, we may appeal to both the pathogenic conditions which serve as a base to the two antagonistic doctrines.

IX. While it is true that after its development yellow fever never, with us, presents the intermittent type, whether in the febrile reaction of the first stage or in the other symptoms, it is no less true that the disease is often preceded in its manifestation by frank paroxysms of intermittent fever of quotidian or double tertian type, upon which quinine exerts no influence. Between the first and second paroxysms there is complete and prolonged apyrexia; between the second and third the apyretic interval becomes shorter, and thus the type of fever passes from intermittent to remittent and to continued, and then the characteristic symptoms of the first stage of yellow fever appear in the field and clear up the diagnosis. In 1870, 1873, and 1875, I observed many instances of this kind, both in hospital and private practice; among others two seen in the Mizericordia Hospital at different times are prominent, which deserve special mention. (See cases 1 and 2.)

In a great number of cases is observed at the commencement of yellow fever the regular course of a frankly remittent, presenting morning remissions of one or more degrees in temperature, and of ten or more beats in the frequency of the pulse, as well as evening exacerbations in the same proportion. More than once I have observed the appearance of profuse perspiration at the hour of febrile remission, which always authorizes me to employ on this occasion full doses of quinine. In spite of this medication, the remissions keep growing less perceptible every time, the fever assumes the continued type, and the disease becomes definitely established.

After yellow fever has run through its first stage, in which it ordinarily spends twenty-four to thirty-six hours, two, three, or four days,—a profuse and general sweat is sometimes observed, coinciding with the cessation or diminution of the fever; the disorder, in this case, resembles much a malarial remittent fever.

The disease often invades the system suddenly, an intense continued fever manifesting itself from the outset, with the thermometric characteristics already pointed out; it runs through the first stage in twenty-four hours, or in thirty-six at most; it reaches the second, and remains there a few hours, or passes rapidly into the third without any phenomenon of transition being observed; it stays in the last stage one or two days and terminates in death.

At other times the morbid manifestations have a more slow and gradual progress and succeed one another with a certain harmony and regularity, running through their entire course in six or eight days.

In some cases the rapidity of progress is so extreme that there is no time to wait for the effect of the remedies prescribed; in thirty-six or forty-eight hours a person passes from the state of health to that of a corpse; the symptoms are precipitated tumultuously; all is confusion and disorder.

I have never happened to observe the *fulminant* form of which some authors speak, like that seen in some of the gravest cases of cholera. The case of most rapid progress which I have met with was that of a young man recently arrived from Rio Grande do Sul, who, having been prostrated with the first symptoms the night of March 7th, 1873, died at 6 in the morning of the 9th, with profuse hæmorrhages seated in the stomach, tongue, gums, nasal fossæ, and corpus mucosum of the skin; the disease in this young man lasted thirty-four hours. In the case of the captain of the bark *Siffredi*, to which I have already referred, yellow fever ran through its stages in thirty-eight hours—twenty-six he was ill on board, and twelve in the hospital of Nossa Senhora d'Ajuda, where he died.

It is not rare to see the disease advance slowly, assuming the typhoid type; then, together with the symptoms of ataxia and adynamia which appear primarily or succeed to hæmorrhages, are observed multiple abscesses in various parts of the body, suppurating par-

otitis, gangrenous eschars at the points of bony prominence, and at times a profuse and fœtid diarrhœa which goes far to weaken the patient.

Death rarely results from profuse loss of blood; it may be caused by the profound shock to the nervous centres, or follow the continued exhaustion of the radical forces of the system; or its immediate cause may be the slow and gradual asphyxia produced by complete abolition of the function of the pneumogastric nerve.

When recovery takes place, the disease ordinarily progresses slowly; the hæmorrhages disappear one after another; the patient remains in an adynamic condition for several days; little by little he regains his strength, this process being always tardy and demanding from the physician all care and solicitude. Convalescence, doubtful and uncertain at the beginning, is often accompanied by rheumatoid pains in the muscles and joints of the limbs, both upper and lower; it is impeded in its progress by intermittent attacks or by gastro-intestinal disorders such as flatulence of the stomach, pyrosis, nausea, vomiting, gastralgia, constipation or diarrhœa, borborygmus colic, and tympanites.

Relapses, which are at times observed, are almost always produced by errors of diet, or by some other imprudence, such as exposure to a draught of cold and damp air, a general cold bath, insolation, overwork whether physical or mental, a depressing passion, etc. These relapses are extremely grave, and almost always carry the patient to the tomb.

What has been said in regard to the cases of recovery, refers, as will be easily understood, to patients who reach the third stage of the disease; for the relief obtained immediately after the first stage or in the course of the second takes place rapidly and completely, hardly preceded by a short convalescence, except where jaundice appears; then are observed those general and gastro-intestinal symptoms which constantly attend this condition, whatever may have been its origin.

X. The body of a victim presents on its outer surface several very important signs, which, to the eye of the experienced, are at times sufficient to enable him to form a safe judgment regarding the disease which has produced death. The first is the more or less deep yellow color, very like that of saffron, which covers all parts of the outer integument, especially the walls of the chest and abdomen, the face, and the upper limbs.

In some cases the conjunctivæ, which also appear yellow, present at some points true ecchymotic spots.

Together with the yellowness of skin of the corpse, we notice in many cases a certain number of spots of variable color and size, consisting of the ecchymoses and petechiæ occurring during life; these are very constant, chiefly when the disease assumes frankly the hæmorrhagic form. In a woman who died in the hospital of Nossa Senhora da Ajuda, I observed the black spots of which Doctor Costa Alvarenga speaks in his work (without any doubt the most complete and minute upon the pathological anatomy of yellow fever possessed by science),* three in number—one very extensive, and two of small size, all occupying the anterior wall of the belly.

Close to the natural orifices, and on the chin, the chest and the hands of the dead body, are often observed stains of blood, and even some small blood-clots. If there has been stomatorrhagia, or if black vomit has appeared a few minutes before death, the lips appear half-opened and separated by coagulated blood or black matter; in some cases we perceive a blackish or purely bloody spot which, starting from one of the commissures of the mouth, reaches to the angle of the jaw on the same side, forming a trace which gives a very characteristic aspect to the corpse.

I have not yet happened to see the infiltrations of blood in the muscles which were once found by Alvarenga, but it is not surprising that they should sometimes occur when the hæmorrhagic form of the third stage attains its maximum intensity.

When the tissues of a yellow-fever corpse are divided, black blood flows from the surface of the section; this blood is very diffluent and evidently changed in composition.

On the side of the cranial cavity the phenomena met with are indicative of more or

*Anatomia pathologica symptomalogia da febre amarilla que reinao em Lisboa em 1857.—Doctor Pedro Francisco da Costa Alvarenga. 1861.

less marked hyperæmia and of imbibition by the tissues of the coloring matter of bile. The arachnoid and pia mater, as well as the brain-substance, are congested in almost all cases; both these two membranes as well as the dura mater, the latter especially, are at times stained yellow. In some instances is found a notable effusion of yellowish serum in the cerebral ventricles. And it is not rare to observe hyperæmia of the membranes of the cord.

Nothing noteworthy is found in the pericardium in the great majority of cases; I have never seen injection of this serous membrane, nor effusion into its cavity. The heart almost always appears incompletely filled with blood, without the slightest change in its interior—out of five cases in practice there was one of fatty degeneration in the right ventricle, perceptible even on simple inspection.

In all the autopsies I have performed in the Mizericordia Hospital as well as in that of Nossa Senhora d'Ajuda, I have verified the presence of great pulmonary congestion, especially in the lower lobe of the lung; in three cases I found true hæmorrhagic foci, of extensive size, without expectoration of blood during life having occurred in any.

Doctor Alvarenga in sixty-three autopsies found pulmonary congestion forty-nine times; on this point, as on many others, the observation of the distinguished Lisbon physician is in accord with my own; that which occurred in that city in 1857, occurs in Rio de Janeiro. Why — congestion of and even hæmorrhage into the lungs being so frequent in yellow fever—is hæmoptysis so very rarely observed among the hæmorrhagic symptoms of the third stage? May not this be due in great part to the profound derangement of function of the pneumogastric nerve in the last stage, a paralysis of the muscular coat of the bronchi resulting from this which prevents the extravasated blood from being eliminated through the air-passages? It seems probable.

It is in the digestive organs and their annexes that are found the most important and significant changes of yellow fever. In the mouth, traces of the sufferings observed during life present themselves: gums swollen and covered with blood; tongue often covered with a hard and blackened coat, consisting of blood-clots. In the pharyngo-œsophageal tube, particularly at its lower extremity, marked injection of the mucous membrane is noted in some cases. In the stomach, the stage of varied scenes during the disease, the anatomico-pathological changes are variable. In a small number of cases the organ is found in normal condition; often a large quantity of black fluid is present within it, exactly similar in appearance, consistence and composition to that rejected by vomiting during life; this is very frequent in the hæmorrhagic form, especially if the patient has ceased to vomit many hours before death. When there is blood in the shape of black matter in the gastric cavity of the dead body, the mucous membrane of the stomach is stained a dark color, due to the presence of the fluid. When the surface thus colored is properly washed, the dark hue disappears, and then the signs of great hyperæmia are observed, characterized by linear injection of the vessels, by more or less deep red punctations, and by ecchymotic spots of various size and shape. At times, after washing, the mucous membrane appears normal or bleached; it is very rare to find it softened, thickened, or deprived of its epithelium.

Doctor Gama Lobo, analyzing the black vomit of a patient of the Mizericordia Hospital with the microscope, found nothing in the liquid part of the vomited matter; but in the solid were some fatty globules (which he attributed to the ingestion of castor oil), a dark brown substance very deep in color and abundant, epithelial cells, now and then a blood-globule, and a prodigious number (hundreds) of rounded or oblong corpuscles with two nuclei, either solitary or adherent to one another like a cactus, and which (enlarged 160 diameters) gave the specimen the exact appearance of a surface dotted over with spiders' eggs. These corpuscles, on being treated and prepared with alcohol, acetic acid, ether, glycerin, and chloride of gold, suffered no alteration; so also when stained by carmine; but treated with gum-lac, they changed a little in appearance. Our distinguished colleague, using the 10 and 11 immersion-lenses of Hartnack, with three and six eye-pieces, saw that some of these corpuscles, in small number, resembled the *sarcina* of Goodsir, and

others the *cryptococcus* present in the leaven of beer (*Cryptococcus cerevisiæ*), differing from these by the following characters: the corpuscles of the vomit were from 0.01 to 0.02 millimeter in diameter, and the others double that; the former had in general two nuclei or vacuoles and a faintly marked dark aureole; the latter, either no nucleus, or only one very perceptible, slightly reddish aureole. Doctor Lobo found still a third class of corpuscles (and the larger number were of these), very like the sporules of buccal *leptothrix*, with the difference of the latter having no nucleus. He did not succeed in observing the infusoria of which Doctor Joseph Jones, physician in chief of the Charity Hospital of New Orleans, speaks.*

In many cases the small intestines appear healthy, either containing a certain amount of the same fluid found in the stomach, and coming from this organ, or containing bile or other products which usually occupy the intestinal canal. In others are noticed the same changes remarked in the stomach, which occur when in the course of the disease there has been genuine enterorrhagia. In the large intestines, phenomena of catarrhal congestion are only exceptionally manifest, which then coincide with the symptoms of entero-colitis observed during life.

On attentively examining the liver in eleven autopsies, I failed only twice to notice the yellow color of which Alvarenga speaks; and in four in which examination by ether was made, as recommended by the same author, I found a large amount of fat in the hepatic parenchyma.

Although I do not believe that yellow fever is characterized anatomically by steatosis of the liver, as Alvarenga thinks, inasmuch as there are cases in Rio de Janeiro where it is not present, yet I am inclined to the belief that this hepatic change is one of the most constant effects produced by the disease as regards the anatomical condition of the viscera.

The gall-bladder is at times notably diminished in size, with its mucous membrane thickened, and contains a small quantity of condensed and blackish bile; at other times it is found in the opposite condition, dilated, with thinned walls and full of a greenish and even sanguinolent fluid.

Doctor Lobo, examining the liver of a person dead of yellow fever, observed that this organ had been invaded by fatty degeneration, in the cells and connective tissue, as well as in the connective tissue of the vessels, seeming however as if the fatty vesicles were simply deposited between the fibres; for, says the author, the preparation submitted to analysis being washed with a pencil to study the connective tissue only, the fat-globules were detached, which would not have occurred if the fibres had suffered from the degeneration in their proper substance. The same practitioner also observed a noteworthy quantity of crystals of hæmatin.

I found the kidneys almost always congested and undergoing enlargement; in some cases they presented evident signs of fatty degeneration.

In regard to the examination of the kidneys, Doctor Lobo thus expresses himself in his work, published in the "*Relatorio*" of the Baron de Lavradio:

A suitable portion of the tissue of the kidney being submitted to inspection, the first thing observed in the microscopic field was the large amount of fat-globules swimming in fluid, and crystals of hæmatin characterized by the form of crystallization and brilliancy of their color appearing in considerable quantity when a diameter of 160 to 400 was used. Besides this, crystals of tyrosin were seen upon the preparation and scattered through the different layers of the same, it being necessary, in order to recognize them thoroughly, to seek for them by various adjustments of the microscope; centres of hæmorrhage in the cortical and medullary layers; the frame-work of connective tissue, whether observed with the malpighian bodies and uriniferous canals, or after washing with the pencil, appearing as in parenchymatous nephritis. These examinations were made with specimens preserved in nitrate of silver. Next examining the canaliculi with a diameter of 400, it was perceived that the cells lining them were enlarged and undergoing fatty degeneration. Turning the examination afterwards to one uriniferous tube detached from the mass, and using the immersion No. 10, not only was noted a change of form and size of the cells, but also fatty degeneration of them, shared also by the malpighian bodies.

**Relatorio do presidente da junta central de hygiene publica*, apresentado em April de 1874, pag. 22.

In the great majority of cases the bladder remains contracted, containing a small amount of muddy and highly albuminous urine. If there has been hæmaturia, black and diffluent blood is found within the urinary receptacle. If there has been complete and persistent anuria, the bladder appears of very diminished size and containing scarcely a few drachms of urine.

Microscopic examination of the urine of a patient in the Mizericordia Hospital revealed to Doctor Lobo a prodigious number of vibrios, epithelial cells, many crystals of uric acid, of phosphates of ammonia and magnesia, and amorphous crystals; but the most noteworthy phenomenon was an immense number of altered blood-globules, as if the cavity of these globules were filled with dark substances.

XI. In the very authoritative opinion of the Baron de Lavradio, yellow fever is a continued or remittent pyrexia, coinciding with or dependent upon a gastro-entero-hepato-encephalitis, of specific nature, due to miasmatic poisoning very analogous to, if not identical with, that of European typhus, but modified by climatic and topographical circumstances.

My learned and respected master, the Baron de Petropolis, believes that the yellow fever which prevailed epidemically in Rio de Janeiro in 1850 presented generally two distinct characteristics: the first was that of the remittent or intermittent fevers, benign or pernicious, which prevail here endemically, this characteristic of the epidemic having been more commonly observed in citizens of the country and acclimated foreigners; the second, in which the disease well merits the title of icteroid typhus, by reason of the analogies it presents with the typhus of Europe, and differing greatly from the first-named as regards symptoms and gravity, was much more frequently observed among recently arrived foreigners. Admitting a distinction between *typhus icterodes* and the yellow fever of America, the eminent Professor does not dispute the unity of the epidemic condition. In his view, *typhus icterodes* is the European typhus itself, modified by local and climatic influences which produce with us the pernicious intermittent fevers; just as yellow fever is the same pernicious fever endemic in Rio de Janeiro, modified by typhous miasmata.

In my opinion, yellow fever is an infectious disease, produced by the action of a miasm proceeding from the decomposition of organic matter, vegetable and animal; it shares consequently in the nature of the miasm producing the malarial fevers and of that producing typhus. This mixed miasm, after receiving from the sea-air a particular impression, determines in the blood-crasis a profound change, which in the beginning is revealed by phenomena of reaction, and later on by hæmorrhagic and ataxo-adynamic phenomena.

In virtue of this dyscrasia of the blood, as well as of the efforts made by the system to react against it, some organs are secondarily compromised in their anatomico-physiological conditions; the stomach, the bowels, the liver and the encephalon are those most usually compromised, but all the rest feel more or less the progressive changes through which the blood passes and the profound disorders consecutively experienced by the nervous system.

The system behaves in various ways in its mode of reaction, according as the malarial or the typhous element predominates in the infectious miasm; in the former case, the phenomena indicating reaction are assimilated to those observed in the malarial fevers, intermittent or remittent, benign or pernicious; in the latter, to those of typhus properly so-called. As, notwithstanding the origin of this or that element, they influence each other, since they are united, the symptoms revealing the predominant element are a little modified by that predominated over. It is for this reason, I think, that even when the course of the disease is analogous to that of remittent fever, typhous symptoms more or less marked are met with, and that even though the typhoid form is frankly manifested, we observe at the commencement the course proper to malarial remittent fevers. This distinction is of great importance for the treatment, as will be seen further on.

It is deducible from what I have just said, that I think the same way as the Barons de Lavradio and de Petropolis; only, I do not believe, like the latter, that there are two diseases produced by the same epidemic con-

dition, nor, like the former, that there is an idiopathic and essential gastro-entero-hepato-encephalitis characterizing the disease. The morbid entity is one and single, having varying degrees of intensity; the lesions manifesting themselves on the side of the viscera are secondary and variable—they depend upon the miasmatic infection of the blood.

(*To be continued.*)

WOMAN AND THE WHEEL.

BY DOCTOR JUST CHAMPIONNIERE.

Are women to be encouraged in the use of the wheel, or warned to leave it alone?

This is an interesting question, and one which I do not hesitate to say has been treated in rather a shallow manner; a goodly number of those who have presumed to write on the subject have not possessed the indispensable competence.

The question cannot be dismissed peremptorily nor treated theoretically by those who lack personal and prolonged experience: thus, stupid and absurd statements are made by those who compare the use of the bicycle to that of the sewing-machine. Is it not patent to the least observing that the sewing-machine, with its short, rapid movement, limited to the muscles of the thigh and popliteal space, without requiring movement in the operator,—utilized in a restricted space during long hours,—can possess no analogy with this instrument of locomotion involving movements so varied? It must not be forgotten, moreover, that the sewing-machine is not so objectionable in itself, and that it owes its bad reputation more to the melancholy conditions amid which it is employed than to the nature of the movements which it calls forth.

The bicycle, affording a means of exercise in the open air, bringing into play almost all the muscles of the body while requiring but a gentle effort, deserves the attention of every hygienist desiring to obtain for woman a suitable mode of muscular exercise.

Of course, if we choose, we may hold with many that women need no exercise,—an opinion that is not easily supported, yet nevertheless passes current among women of the world. To all who realize in what measure manual labor, daily exercise in the open air, gives to the women of the poorer classes physical superiority and tenacious health, despite inadequate reparation and vicious hygiene, physical exercise must seem a necessity; and this necessity becomes more evident if, continuing the physiological studies so well inaugurated by the remarkable book of Doctor Lagrange, we are bold enough to apply to woman the data which he has obtained from his study of man. Indeed, we may go farther and declare physical exercise to be absolutely indispensable, in view of the mode of life led by women of society, their few opportunities for muscular effort, the necessities of their existence, education, and labors.

Theoretically all this may be conceded, but in fact we find that woman has few facilities for exercise. Gymnastics, but little used for children, are practiced by very few women. Fencing, which might be of service if both hands were used, is little known to the fair sex. The fashionable game of tennis would be valuable, although it presents several disadvantages and tends to exercise more particularly but one side of the body. Horseback-riding is almost the sole exercise which is regarded with favor as suitable to woman; and in my judgment it is the worst of all—the most dangerous,—the benefit derived not compensating for the serious drawbacks.

Believing in the great utility of muscular exercise for women, theoretically the bicycle has struck me as being the ideal instrument for the purpose. It entails little exertion; the effort is gentle, and the muscles are at no time in a state of great tension. On the other hand, almost all the muscles of the body are brought into play. Those of the legs, especially those of the thighs, are employed in propelling the instrument; at the same time those of arms and shoulders are braced against the handle-bar, while those of the back and loins are made to contribute power to the propelling movement. The respiratory muscles and those of the thorax are forced into exercise in order to keep pace with the exaggerated movements of inspiration and expiration.

Finally, all the muscles of the trunk are brought into play to maintain the equilibrium of the wheel; and here we have the great

superiority of the bicycle over the tricycle. With the latter there is less harmony in the movements, and the expenditure of muscular effort is infinitely greater. Hence I always recommend the bicycle in preference to the tricycle, and I maintain that women should use the latter only for short journeys, tricycle-riding requiring an effort to which they are rarely equal.

The necessity of maintaining the unstable equilibrium of the bicycle is its chief characteristic. In his work on the Physiology of the Bodily Exercises, Doctor Lagrange states that the best forms, those which assure the symmetrical development of the body, are exercises in equilibrium, even the simplest. The bicycle is the most perfect apparatus requiring the maintenance of equilibrium; and it is easy to operate the wheel, so that this maintenance may be made more difficult by requiring the more active coöperation of the muscles of the trunk (riding with one hand on the handle-bar, without hands, frequent turnings, etc.).

The foregoing shows sufficiently my reasons for holding that women will find in the wheel the most perfect means of physical exercise; and experience further confirms this. I do not approve of races for women, however; my observations have simply taught me that wheeling, if kept within wise limits, is highly profitable and will give to women a muscular development which many of them sadly need; that it will improve the general health and radically modify many of the forms of *malaise* begotten by a too sedentary life. Let me add, the exercise imparts a certain suppleness, precision and address to the movements, besides cultivating courage and quickness of eye, and may further inspire a salutary curiosity for travel.

The employment of the wheel introduces new ideas into the life and education. I go so far as to declare that it is a moral agency, since it will permit wife and children to participate in the exercises of the husband and father. Among all the sports, it is perhaps the only one which may unite an entire family in the same exercises and pleasures.

Woman's use of the wheel has been charged with many disadvantages which result solely from injudicious employment; but the exercise in itself does not necessarily involve any of these inconveniences or drawbacks. It is true, of course, that to obtain all the necessary benefit, the use of the instrument must begin in a methodical manner. People take the pains to study with scrupulous care the work and gait of various runners, and a host of data are taken into account, since experience has shown their influence. It would accordingly seem at least equally desirable to determine the conditions which enable women to obtain from the machine the health and pleasure it can assuredly be made to yield.

In the preliminary work, as in actual use, it should be constantly borne in mind that women, not trained to any muscular exercise, should be treated with much more consideration than men. The lessons at first should not be too long or too frequent. It is only at the outset that there is danger of excessive exertion, for one soon learns to moderate the efforts—consequently women should be given a longer term for acquiring mastery of the wheel.

Having learned to ride, to dismount, and to turn, at first the pupil should take no long rides, and should climb none but the most gentle ascents.—Right here is the danger of excessive fatigue injurious to the health. Woman should take a long time to habituate her muscles to the new exercise; and even when she is perfectly at home on the wheel, she should remember her sex is not intended by nature for violent muscular exertion, and that bicycle-riding is suited to her needs only for the reason that it spares any serious effort. Every time, therefore, that a woman at home on the wheel contemplates a series of long rides, she should enter on a course of gradual training. Disdaining this precaution, she is in greater danger than a man of subjecting herself to extreme exhaustion, muscular pains, general *malaise*, and that form of fever which characterizes the abuse of exercise by subjects who are not properly prepared. And even when a woman has cautiously prepared herself and has trained for the work, her speed should never be that of an adult man in full muscular vigor.

I have said that excessive speed and hill-climbing should be tabooed; continuous exercise should likewise not be imposed on a woman. Sojourn in the saddle should be frequently interrupted, especially where the

country abounds in hills, for woman is much more subject than man to stiffness and cramps in the muscles.

Women should furthermore avoid excessive speed on the wheel: not only does fast riding require too much energy, but it is too great a strain on the heart. Women are more readily winded; the heart is more sensitive. We know that in muscular exercises which are too rapid and continuous the heart arrests the athlete—it is not so much the muscular effort. Indulgence in rapid riding involves the imminent danger of foregoing all possibility of salutary gentle exercise.

Woman is more sensitive to exposure than man. She is less accustomed to it, and she must be guarded against excessive cold or heat. Chilling after exercise is an enemy more redoubtable than many young or inexperienced riders are disposed to admit, and women should be careful to avoid its dangers. In brief, the woman who proposes to ride must undergo suitable preparation and surveillance.

But if the nature of the female organization imposes certain special precautions, on the other hand women are suited to wheeling in some important respects. The young woman is endowed with a natural suppleness which makes it easy for her to maintain her equilibrium, and which imparts to her a satisfactory measure of security on the wheel. She quickly learns to skate, and in the circus do we not see the women performing all the exercises of the jugglers and equilibrists? It is easy for a woman to learn to pedal with a regular rhythm.

The endurance of woman is very great, if she be not subjected to violent strains or spurts. Now we know that endurance is that extraordinary quality in the cyclist, the necessity and possibility of which are demonstrated by recent observations. A woman, surrounded by good conditions and properly fed, can do a very respectable amount of work on the wheel. First and last, however, provision should be made for a sufficient alimentation and abundant sleep.

It may be urged that woman's use of the wheel is interrupted at certain periods or by a supervening pregnancy. This is absolutely true; and I hope that cyclists, learning the value of exercise, will have a better conception of their duties and the care they owe themselves than those women who under like circumstances continue to dance, to ride horseback, or to participate in other exercises equally dangerous and perfectly useless.

If cycling is to become popular and useful, if it is to yield to woman all the benefits she has a right to expect, certain conditions must be observed. In the first place the wheel must be proportioned to her weight and height. Manufacturers formerly contented themselves with the assertion that a solid wheel must be perforce a heavy wheel. We know now that light wheels are obtainable which afford a satisfactory measure of solidity.

It goes without saying that the pneumatic tire should be chosen, to reduce shock and to render the jolting less sensible; the pneumatic wheels are also propelled with greater ease.

The machine should be low and should be of the type known as "lady's wheel." No woman should ever mount a man's wheel; she runs the risk of serious danger if she does so.

The bicycle should be carefully adjusted. The saddle should be rather wide and tipped backwards so that the rider will be seated squarely on the buttocks, without risk of gliding forward on the saddle, even when coasting down hill.

The handle-bar should be much higher than in a man's machine. This is to prevent the doubled-up attitude of the racers, which to a woman would be very injurious. She should sit erect, never lean forward.

Thus seated on a narrow saddle, it is supposed that the female rider is infinitely less at her ease than the woman seated *en Amazone* on horseback. But people forget that the attitude of the equestrienne is absolutely vicious. Many who have had experience maintain that if it be seriously desired to gain woman's favor for horseback-riding, with a minimum of inconvenience, she must ride astride. The bicycle saddle is perfectly comfortable to a woman, if only it be adjusted with care and suited to her needs.

The woman's costume deserves serious consideration. First of all, the costume must be attractive, or the wheel will not come into vogue. Women would not be attracted, and the public would not be reconciled. The

long skirt is not pretty and is actually dangerous. The short gymnastic blouse, with long pantaloons, is more convenient, but equally lacking in grace. Another costume naturally suggests itself, and that is the so-called "hunting dress"—short trousers and gaiters, with short skirt. We all know women who hunt for the sole purpose of exhibiting this becoming costume. A similar dress must accordingly be adopted. With this costume and on a well proportioned wheel, a woman will present a very pretty sight, when the public shall have become habituated.

A non-adjusted corsage will be found the most practical and satisfactory. This is the most compatible with the indispensable under-clothing, whether linen or light gauze, and with the suppression of the corset, partial or entire.

This suppression of the corset is a necessity of the *first importance*. In the first place, the ordinary corset does not give complete freedom for the movements which must be executed on the wheel. Nor does it permit free expansion of the chest, as it should when the gait is accelerated. Finally, it greatly impedes the circulation in the lower members, and the veins of the legs may be engorged as a consequence of constricting the waist. Hence the corset must be suppressed or so reduced as to lose all likeness to that which women are now in the habit of wearing.

On the shoulders and the arms the garments should be loose and easy. Numbness, cramps, and even inability to hold the handles for a long time, may result from tight-fitting clothes.

The stockings should not be secured by garters: the veins of a woman's leg are much more disposed to engorgement than those of the male leg, and care must be taken to avoid constrictions of the calf. Over the stocking, a loose gaiter of Jersey cloth should be worn to protect the calf.

The low shoe may be worn, but the foot is best protected by a high shoe or by a boot with low gaiter, not too tight.

Next to the skin, women and men both should always wear flannel or flexible "tricot." At all events, on returning home the fair rider should follow the example of all men who are accustomed to exercise: she should change her moist underwear at once, and adopt, in entering on an unfamiliar form of exercise, the hygienic habits without which the utilization of the muscular powers, so beneficial to health, may be a source of immediate danger.

The coiffure involves the use of the veil.

These rapid indications I set down without pretending to write the treatise which is really needed. I simply wish to affirm in passing that if woman is to derive great benefit from the wheel she must undergo the regular athletic rules, and not trifle with any dangerous caprices. Never having participated in exercise worthy of the name, she cannot claim immunity from the necessary rules which all men accept. On the contrary, she must be more prudent and more methodical.

Properly to advise any woman, the physician must take into account her age, weight, facilities for learning to ride and for subsequent training, her dietary *régime*, etc. Acting rationally, the improvement in woman's health will be found more striking than in man's—more striking because we are not accustomed to studying in woman the happy effect of muscular activity. The thorax and especially the muscles will develop with manifest rapidity. The muscles of the arms, shoulders and neck grow hard and enlarge in a manner truly surprising; concurrently there is an augmented resistance to fatigue, the degree of this resistance surpassing all expectations.

For any young woman, wide-awake and not too heavy, the bicycle is the ideal exercise. But for my part I am convinced that we shall go farther. After noting that the wheel gives benefit and not injury to the female rider, the machine will be used in many maladies, especially those which result from retarded activity of nutrition. From the wheel we shall then expect the cure of a host of nervous symptoms which now cause us so much embarrassment in our treatment of women because we are at a loss for a suitable form of muscular activity. Wheeling will be used to counteract a precocious obesity, etc.

Women have been prevented from using the wheel, first, by the conservatism which opposes the adoption of any new fashion or custom. Secondly, a large number of those who talk about the wheel and the exercise

know little of either. A similar spectacle was recently observed among our legislators, who in the course of a memorable discussion rejected but one opinion, and refused to hear the only person among them all who understood the question and could express a reasonable opinion.

For my part, I have practiced wheeling and I have prescribed it. To a number of women I have been the cause of their first initiation into athletic sport. Not only have I failed to observe accidents, but, on the contrary, very happy results have been obtained.

Finally, I would say to those who find in this short paper a too manifest partiality, that if the advocates of the same view are not yet numerous, we have among us several who are thoroughly competent. I might refer, for example, to the remarkable book of Doctor Jennings (Health through the Tricycle), which contains much surprising but precise information respecting maladies which have been favorably influenced by wheeling.

Paris, France.

"THE TRUTH, THE WHOLE TRUTH, AND NOTHING BUT THE TRUTH."

There is an illustrated paper published in New York, denominated *Truth*, but it seems for once to have departed somewhat from its title, as it says:

The following advertisement appears in one of our daily papers: "Wanted.—A gentleman to undertake the sale of a patent medicine. The advertiser guarantees it will be profitable to the undertaker."

This *original* (?) note, with slight modification, appeared in THE MEDICAL AGE some time since, and as a matter of fact the advertisement *did not* appear "in one of our daily papers," but in an Irish newspaper, from which source the AGE derived it. It has been generally copied by the medical press throughout the United States in the form in which it appeared in THE MEDICAL AGE. Of course the latter has no objection to *Truth* making the best of anything of this kind; and though not amiss to being patted on the back occasionally, we would have permitted the matter to pass unremarked but for the fact the wording has been changed in a way that evidences an intent to plagiarize.

The Medical Age.

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Editorial.

MEDICAL SNOBBISM.

Under the caption of "Professional Titles" the *North American Practitioner* remarks:

American titles of all sorts are so freely bandied about, and procured at so little cost, as to be proverbially of little or no value. It may truthfully be said that in this country to bear no title is no discredit, but to assume one may challenge suspicion. The assumption of military titles is of such frequent occurrence as to elicit neither comment or criticism; doctors of philosophy and of divinity seem indigenous to our soil—whatever the vicissitudes that may affect other practices, there is never a failure in this, and there is here ever utter disregard of "supply and demand."

When we come to the profession of medicine, matters are still worse. The title of "Doctor" and "Professor" here find their lowest level, until further prostitution of the terms is hardly possible.

This evil will, of course, ultimately work its own destruction, but in the meantime American doctors are discredited abroad; and with the character of the education furnished by the majority of medical schools, it is little wonder American degrees are looked upon askance; and less remarkable still that the parade of titles so frequently assumed forces covert sneers from all classes of foreigners.

Pick up any medical journal and note the caption and titles preceding almost any article! Beardless boys do not hesitate to rush into print, dogmatically deciding "questions" which have been mooted for years, and with the hope of carrying weight and forcing themselves into prominence is added a long array of titles—members of this and that, *ex* this and the other, late resident physician to some obscure institution possessed of little aside from a title—and withal

are added new memberships in unheard-of societies. Many of these fledgelings, less than two years from medical school, sport an array of titles far greater in number than the really significant acquisitions in this line of the most noted practitioners of half a century's standing. A cursory visit or two to an almshouse, a chance half-day at a dispensary, membership in a mutual admiration organization, all are paraded.—It is no uncommon thing to see as many as twenty such titles. Atop of this, many of these same individuals, anxious to advertise themselves, even descend to perjury. A case recently came to attention in which a young man, less than twenty months from college, tendered for publication a report in which he claimed to have attended "*some hundreds*" of cases of typhoid fever, and by a certain form of treatment—utterly ridiculous on its face, as well as physiologically—to have "cured every case;" it is perhaps needless to say the cases were manifestly spurious.

It is a disgrace to the profession; and it is a disgrace to the aspiring tyros themselves—if they did but know it—to thus attempt to advertise and secure notoriety. Furthermore, it is evidence of very weak and ill-balanced brains

No one cares how many memberships a person may hold in a medical society; it means nothing, and adds nothing to one's status. There are few professional organizations in the United States whose requirements are more than a diploma from a medical college, and the initiation fee.

The title "Professor" is also looked upon with anything but respect by the majority of thinking people, since medical colleges are constantly springing up with mushroom growth, and, as is well known, the majority of these concerns are established simply for the purpose of conferring upon some ambitious but obscure medico a title whereby he may advertise himself. Many of these colleges, moreover, are so complacent that a large share of each graduating class is accommodated with titles as lecturers, prosectors, etc., etc.

There was a day when the simple M.D. was considered sufficient. This represents a certain amount of study—a vast amount of work in the better schools. The titles of A.B. and A.M. are legitimate, inasmuch as they usually represent definite mental labor, greater or less according to circumstances; but all the memberships in microscopical societies, in antiquarian societies, in the societies for the prevention of cruelty to children and animals, temporary services at some local poor-house, etc., etc., inasmuch as they mean nothing, are productive of no credit to the individual who so flaunts them. Indeed, matters have arrived at such a stage that the moment one takes up a volume and finds the author devoid of titles, there arises a feeling of respect for that individual such as is rarely excited by the most lavish display of professional trophies in the way of memberships, lectureships, etc.

Abroad, titles mean work. In America they only serve to exhibit puerile snobbishness and a quackish ambition to advertise in a way that is fully as reprehensible as to appear in a charlatan advertisement in the columns of the daily press. Writers of articles and makers of books should rely upon ability solely to make a record, and not upon a lot of catchpenny titles.

SOME NEEDS OF THE MEDICAL PROFESSION.

Doctor Stephen Mackenzie, of the London Hospital, who is the practical successor of Sir Andrew Clark and known as one of the most accurate and painstaking of teachers and diagnosticians, insists that more attention should be paid to the study of the pulse by touch; he avers—and truly—that the majority of physicians of the present day are unable to distinguish and interpret the character of the pulse with any approach to that skill which was possessed by generations gone by; that the introduction of instruments of precision, more especially the clinical thermometer, has led to the neglect of a very important and useful measure. He finds that in hospital the taking of temperature is often left to the house physician or attendant, in private practice to the nurse; and that neither makes any examination of the pulse—and the nurse certainly is incompetent to interpret it—or at most not more than to note the number of beats per minute, caring or knowing nothing of its other characters.

The foregoing recalls an incident narrated

in *The Hospital* anent respiration *vs.* nourishment:

"What's the patient's temperature this evening, nurse?" "I've just charted it," returned the latter, "and I've taken it and the pulse and respiration every two hours." The doctor looked surprised, but silently held out his hand for the neatly marked record.

"What nourishment have you given?" he asked, after looking at it.

The nurse seemed startled. "I'm afraid I can't tell you. I know she had some milk once, and since then some beef tea, but I did not remember about the nourishment this evening. I was so anxious to get the pulse and respiration right."

"Then perhaps I had better attend at feeding times, and see to the nourishment myself," retorted the old-fashioned doctor sharply.

A PROFESSIONAL DISGRACE.

Not satisfied with the "sad lesson taught by experience" with the Bourgeon craze, Pasteur humbug, Listerism rage, Koch fiasco, Haffkin deception, animal-extract swindles, *et al.*, the medical press have now seized upon another novelty, viz., the antitoxine treatment of diphtheria. The same injudicious haste, the same craving for therapeutic sensation, are manifested here as with all the foregoing; yet a little calm reflection should convince anyone possessed of a modicum of pathological and physiological knowledge that the claims advanced are not based upon any scientific grounds, and that, having served the purpose of the faddist and of self-advertisers, this "specific" will speedily retire to "where the woodbine twineth," to keep company with other disgraces of the sort, and to add to the constantly swelling list of theories that during the last decade have tended so greatly to cast odium upon the medical profession. Indeed, the latter part of the nineteenth century, so far as medical science is concerned, seems bound to go down to posterity with the record blacker than that which pertains to the superstition of the Middle Ages, and with none of the palliation that mitigates the latter. It is by just such measures that the wheels of therapeutic progress are being blocked, and even *locked;* the car that should be one of triumph constantly advancing, on the contrary is slowly and persistently retrograding. Young men are turned out from our medical schools absolutely ignorant as regards any rational therapeutics, and worse than ignorant with regard to those articles of the materia medica which won their place in the armamentarium of the physician by years of service developed through centuries of study and experience.

The antitoxine craze is simply a revamped form of Behring's "curative serum," and the claims for the latter have been thoroughly examined already in the columns of THE MEDICAL AGE by Professor H. Buchner.* The extravagant and sensational assertions now being revamped are going the rounds of every journal; superficial trials are being made by unqualified experimentors, who, fearing lest they be anticipated, rush into print with records that are not only incomplete and undeveloped, but oftentimes are absolutely false. As a matter of fact such remedies should never be employed until their action has been thoroughly inquired into at the hands of expert, patient, painstaking observers, and their properties and disadvantages established with something approaching scientific precision. But unfortunately the majority of practitioners at the present day enact the rôle of sensation-makers, and are ever on the alert for new game. Wherever they scent the shadow of a new discovery they fall headlong one over another in their eagerness for publicity. The idea moreover is not a new one, but is a return to the humoral pathology of the last century. It is a retrogression, and serves no earthly purpose except to cast odium upon a profession which those who practice should hold sacred and endeavor to lift to a higher plane, instead of dragging into the abyss of sensationalism.

HEART RUPTURE IN ANIMALS.

A Canadian newspaper, *The Empire*, gives an apparently authentic account of the death of an owl from fright. The bird was fired at several times, but missed, and after reaching a coigne of vantage suddenly fell. It was

* MEDICAL AGE, March 10th, 1894, page 136.

supposed to have been wounded, but when examined by the taxidermist was found free from external lesion of any kind. The heart, however, on examination proved to have been ruptured.

It is well known that North American hares are very easily killed—the same is true, to a certain extent, of the ordinary domestic rabbit. The little creature denominated "cotton-tail," which haunts the fence-rows, old pastures, "slashings," and second-growth timber—popularly known as a rabbit, but which, however, is nevertheless a true hare—is so very timid as to be particularly susceptible to death from fright. Sportsmen frequently wonder why these creatures succumb so easily, often to wounds that are purely superficial. We have repeatedly shot these, and discovered the pellet which was apparently the cause of death had but just penetrated the skin, producing no worse lesion otherwise than mere ecchymosis. In such instances it has invariably been found that the heart had been ruptured. Recently an examination of a number of hares purchased in the open market revealed that eleven out of thirteen had died from this lesion.

Again, within a few hours an ouistiti, or marmoset (*Hopale jacchus*), in possession of the writer fell dead from fright on viewing an alligator two feet long. The post-mortem revealed in this instance, the same as in the hares and the owl, a ruptured heart.

Judging from the foregoing, death in the smaller and more timid animals probably more often occurs from shock inducing heart rupture than from the wound *per se*—a fact that is of considerable pathological interest.

DEATHS FROM COCAINE.

The general press reports the demise of Thomas Adams, a farmer near Troy, N. Y., while in the hands of a traveling dentist who claimed to draw teeth without pain. Two teeth were extracted, and the dentist admits that he injected Cocaine *ten times* into the jaw before performing the operation. Another death occurred in a dentist's chair at Goshen, Ind., the patient being a man of fifty years of age, who, like Adams, had two teeth extracted. Ten minims of an eleven-per-cent. solution were injected into the gums, and the patient died a few minutes after the operation.

These are but two of more than a score of cases of precisely similar nature collected by the editor of THE MEDICAL AGE. We have before called attention to the danger of employing Cocaine the character of which is unknown; also to the fact that this alkaloid contains a sub-alkaloid, so to speak, viz., *Iso-Atropyl-Cocaine*, which is one of the most powerful heart-poisons known. Different Cocaines present different proportions of this latter alkaloid, and its effects are so well known to chemists that certain pharmaceutical houses will not market a Cocaine until this obnoxious element has been removed therefrom.

AVERAGE LIFE OF PHYSICIANS.

One of the most curious statistical records compiled during the nineteenth century is that by Doctor Salzmann, of Essling, Würtemburg, regarding the average duration of life among practitioners of medicine. He found, on going over the ancient records of Würtemburg, that in the sixteenth century the average duration of life among medical men was but 36.5 years; in the seventeenth century, 45.8; in the eighteenth, 49.8; and that at the present time they reach the favorable age of 56.7.

It appears in this compilation that Doctor Salzmann ascribes the great increase in longevity to the disappearance of the "black pest," the introduction of vaccination, and the great diminution in the number of typhus epidemics—representing three classes of disease which formerly decimated the medical population.

EDITORIAL NOTES.

A Bit of Natural History.—

An exchange states that a water-turkey—one of those vicious, long-necked and sharp-billed birds that belong to the heron family, and fly so weirdly along the waterways of Florida—recently caught and placed on exhibition, killed a curiosity-seeker by penetrating the brain of the latter through the eye. The man stooped down to peer between the slats of the box in which the bird was

confined, when, "quick as a flash, the long stiletto-shaped bill shot out and pierced the pupil of his eye, entering into the brain, and causing death a few hours later."

Whether or not the tale is true, it possesses a very strong element of probability. All birds of the heron tribe are vicious, and moreover seem to have an innate knowledge of the weakest portion of the human anatomy. Sand-hill cranes have been known to attack man, and such attacks are very dangerous, since they invariably strike at the face, apparently seeking to wound the eye. The blue heron in captivity always seeks the same point of vantage to deal its blow. Recently came into possession of the editor a live bittern which exhibited a like degree of viciousness. It was given to a taxidermist, who, while examining it and holding by the legs, carelessly gave an opportunity, when it drove its bill deep into the side of his nose, less than three-quarters of an inch from the eye. This bird was greatly handled, and was never raised from the floor that it did not strike at the face. It would also strike at the hands, but paid no attention at all to the foot or to those parts of the body that were clothed. It is notorious also that in securing prey, as far as possible, they kill by striking at the eye.

Questions of Vital Interest.—

The *Cincinnati Medical Journal* declares of vital interest to the profession the following queries:

Does the average medical society help or hinder progress?

Are proprietary medicines a help to the medical practitioner in giving to patients who would otherwise be claimed by the specialist?

Does the presence of microbes occasion any disease whatever? Are they present in every healthy organism—in this connection readers are referred to an article by George M. Sternberg, Surgeon-General of the U. S. Army, and many others who think for themselves, who declare the present microbe scare the most absurd delusion in medical history:

Can a physician keep a hotel for patients without having his professional honor blunted by a hotel man's desire for many and long-staying guests?

The Microbe in Society.—

A paragraph has been going the rounds of medical journals that an anti-shaking-hands society has been organized at Baku on the Caspian Sea, to prevent the exchange of bacilli by contact, the members of which pay six roubles a year, wear a button as a sign of membership, and are fined three roubles for each handshake.

The idea seems so utterly ridiculous that it would scarcely be supposed such a paragraph is perpetuated in earnest, yet such appears to be a fact. The truth is, however, that this society had its origin in the fertile brain of a Russian correspondent of an English newspaper, who, thoroughly disgusted with the bacilli craze as manifested in European medical journals and in the public press, took this satirical and effective means of showing to what extent asininity will lead the human race.

Meteorology.—

Of all the sciences, meteorology is probably the farthest from perfection. Many dabble in it, but few seriously attempt to reduce the abundance of observations to law and order. One of the reasons for this state of things is that, so far as we can remember, none of our educational institutions include systematic courses of meteorology in their curricula. There is practically no field for professional meteorologists, and therefore no training-school exists. For the sake of the science we are glad to note, however, that the Board of Regents of the University of California has decided to establish a course in meteorology. Through the course of study and investigation which the students of meteorology will prosecute at the University, valuable additions to knowledge may be expected.

The "Triumphal Arch."—

At the Harvard Medical School in the winter of 1875–6, during one of the lectures on anatomy given by Doctor Oliver Wendell Holmes, the bones of the pelvis were being considered. One specimen upon the table consisted of the lumbar vertebræ, the pelvic bones, and the upper third of the two femurs. These were all held and firmly fixed in relative positions

by their proper ligaments. Using the connected vertebræ as a handle, he took the specimen from the table with his right hand and swung it around toward the class. Holding it up, he placed the index finger of the left hand upon the crown of the pubic arch, and said:

"Gentlemen, this is the triumphal arch under which all candidates for immortal honors are obliged to pass."

Original Nomenclature.—

Doctor George P. Bradley, of the United States Navy, writes us of a circumstance which happened to a party of emigrants, one of whom was his brother, in attempting to cross the Cascade Range in 1849. Their vehicles were drawn by oxen and mules, both of which were unknown creatures to the Indian tribes of the region. Becoming stalled for a week, owing to the accumulation of snow-drifts, the query was finally made of the Indians in the neighborhood whether it would be possible to get through. The latter replied: "The *whoa-haws* might, but it was doubtful if the *damn-your-souls* could!"

The Origin of Malaria.—

We are in receipt of a communication from Doctor H. B. Baker, the Secretary of the State Board of Health of Michigan, who calls attention to the fact that the theory regarding the origin of malaria recently promulgated editorially in these columns, is practically the same as that advocated by Doctor Baker in the *Journal of the American Medical Association* of October 18th, 1890.

This, coming from the source it does, adds materially to the strength of the contentions advanced in the editorial.

Thyroid Extracts.—

An examination of Thyroid Extract, or Thyroidine, made by maceration in glycerin, water, and alcohol, possibly in connection with a little boric acid, proves that this substance is utterly inert therapeutically; consequently those who desire to employ Thyroids medicinally have no recourse but to prescribe the desiccated powdered gland. Very extensive experimentation in the hospitals of Great Britain and France has conclusively proven the contention just made.

Items and News.

Removal of the Uterine Appendages by a Sow-Gelder.—

The following was sent to the *British Medical Journal* by Doctor Arthur Thompson, being an extract from page 364 of a book published in 1653 entitled "Man Transformed, or the Artificial Changling," by J. B. (John Bulver, M.D.):

"It is an anatomical question, *an mulier castrari possit*, and it appears *de facto* to have been done; but concerning the manner of operation there ariseth a great difficulty—whether they castrated women by drawing out their wombe, or by avulsion of the testicles. Both waies it is certain that women will be brought into great danger of life; for although sows may be spaded, yet with the like security it cannot be administered in women by the reason of the seat wherein they are placed and the society they have with other parts; for he must necessarily cut both the flankes who castrate a woman, a work full of desperate hazzard, yet it may be done with little or no danger if it be attempted by an artfull hand. And a friend of mine told me he knew a maid in Northamptonshire that was thus spaded by a sow-gelder, and escaping the danger, grew thereupon very fat. A gentleman who undertook since, in some company, to tell me this story againe, said he was present at the assizes of Northampton when this sow-gelder was arraigned for this fact. I doubt there is some mistake in the scene; for by another information of a justice that was there, it was in Lincolnshire, and the fact done upon Lincoln Heath, and that was not his first fact, so that his first attempt might be upon the Northampton maid. This last maid's name was Margaret Brigstock, but the judges were much confounded how to give sentence upon an act against which they had no law, for although the castration of man was fellony by the law, yet there was nothing enacted against spading of women; and well might they be ignorant of such a case when Platerus, the great physician, professeth he remembered not that ever he read or heard of such an attempt. This Clearke (for that was his name) was hanged for this last fact, but not by a law, but for robbing her of two penniworth of apples which she had in her apron."

The French and their Pharmacists.—

In a paper on "Pharmacy as Practiced in France," an English newspaper gives some interesting facts.

It appears that French pharmacists carry on their business under different conditions from

those under which the trade is carried on in Anglo-Saxon countries. For instance, no such druggist is allowed to have more than one shop, nor is he permitted to work in association with unqualified persons. *Pharmaciens* have the sole right of compounding and retailing medicines for human beings, either for internal or external use. Medical men resident in rural districts where there is no pharmacist are allowed to dispense medicines, but if they visit a patient who lives near an established pharmacist they are not entitled to send medicines. Hospitals and religious communities can compound medicines for their inmates. Secret medicines are illegal, and the formulas of all special preparations have to be submitted to a board appointed by the State and approved of before being sold to the public. The sales at pharmacies are confined strictly to drugs, chemicals, and mineral waters, and it would be considered derogatory to handle the variety of toilet and other fancy articles which forms an important part of the business of their English and American brethren. Some of the foregoing regulations might be advantageously adopted in the United States, where the relations between pharmacists and medical men are ill-defined and unsatisfactory.

Evolution of Bacteriology.—

The more progressive among bacteriologists are converts to the belief that not bacteria, but certain ptomaines which they produce, are the cause of disease. They are "growing," as the children say, "warmer" in their hunt for the ætiological factors in the production of abnormal states.

When they go a little further and reason that these ptomaines are the result of faulty or excessive metabolism loading down the blood with toxic, irritating substances which the liver cannot destroy or the emunctories eliminate with sufficient rapidity, the search will become very hot indeed.

But even the first-named change is a very beneficial one so far as therapeutics is concerned. There is not so much said about killing microbes by means of strong antiseptics, which also involves a still further devitalization of tissues whose integrity is already seriously impaired.

On the contrary, we hear active eliminant measures strongly advocated. And this, with alteratives, a suitable diet, and whatever collateral treatment may be required to meet symptoms, is all that is necessary in any form of disease.—*Medical Brief.*

Quacks in High Places.—

In the March issue of the *Magazine* we attempted to show that W. A. Hammond was the head and front of the Columbia Chemical Company's Animal Extract "fake." This we succeeded in doing, notwithstanding Hammond's denial of his connection for revenue only with this combination of cupidity and duplicity. We also said in a later issue that the advertisement of the Columbia Chemical Company had been thrown out of all reputable periodicals in this country. In this statement we were correct, but are pained to see that the hydra-headed concern has come out in new clothes with which the combination has successfully deceived the medical press and is now parading in the daily press roseate promises to the callow youth suffering from "seminal weakness and loss of memory" and the specious plea of restoring the prematurely lost sexual powers to old debauchees, while it offers the same nostrums to the medical profession as reliable therapeutic agents.—*Fort Wayne Medical Magazine.*

[And now, according to the *Medical Record*, "Animal Extracts" are being placarded "on the public bulletin-boards" in New York City. —ED.]

Eating Before Sleeping.—

Many persons, says Doctor W. T. Cathell, though not actually sick, keep below par in strength and general tone; and I am of the opinion that fasting during the long interval between supper and breakfast, and especially the complete emptiness of the stomach during sleep, adds greatly to the amount of emaciation, sleeplessness, and general weakness we so often meet. Physiology teaches that in the body there is a perpetual disintegration of tissue, sleeping or waking; it is therefore logical to believe that the supply of nourishment should be somewhat continuous, especially in those who are below par, if we would counteract their emaciation and lower degree of vitality; and as bodily exercise is suspended during sleep, with wear and tear correspondingly diminished, while digestion, assimilation and nutritive activity continue as usual, the food furnished during this period adds more than is destroyed, and increased weight and improved general vigor is the result.—*Maryland Medical Journal.*

A New Scientific Experiment.—

A frozen soap-bubble, broken in two and floating like an iridescent transparent eggshell on the surface of a vessel of liquid air, was one of the most marvellous sights shown by Professor Dewar at a recent lecture before the Royal Institution on the effects of intense cold. A few spoonfuls of liquid air

were poured into a glass vessel, and the intense cold caused by evaporation induced a miniature snow-storm in the atmosphere above the liquid. Then the soap-bubble was lowered on the end of a rod into the freezing atmosphere. The bubble became darker; the movements of the rainbow film grew slower; it contracted somewhat in size, and a moment later froze. A slight movement broke it from the rod in two pieces, which floated for an hour, gradually accumulating a tiny snowdrift within, precipitated from the freezing air above.—*New York Sun.*

Death on the Bicycle.—

At a meeting of the Paris Academy of Medicine in September, Doctor Petit related three cases of sudden death from this cause. The first was that of a man of sixty-five; the second was that of a physician, aged forty-eight, who had grown too fleshy after convalescing from typhoid fever and resolved to combat the tendency by bicycle exercise; the third was a clubman, aged about forty.

From the foregoing facts Doctor Petit concludes that cardiac diseases furnish a decided contra indication against the use of the bicycle, as does also old age. Indulgence in this species of pleasure should therefore be prohibited to both these classes.

Success of the Medical Profession.—

Everyone desirous of entering the medical profession should know that to succeed in this noble vocation it is necessary that a man "should be imbued with a love of humanity and a love of science, and should be indifferent to the worship of the god of the modern world—the golden calf. No man whose aim is to make a fortune should dream of entering the medical profession. Let him learn the grocery business or the drapery business; he will not only fail in medicine, but will help to degrade it."

These remarks are applicable to students of most branches of science.—*Nature.*

A Hint in Genito-Urinary Surgery.—

A proceeding of Mr. Watson Cheyne, of King's College Hospital, London, is worthy of attention. Before removing the inguinal glands or making the operation for radical cure of hernia, varicocele, or the like, he always takes a stitch through the integument of the penis and then of the thigh, and ties the unruly member over out of the way. A more useful manœuvre is that in dressing any wound he applies outside of the gauze two or three sponges followed by a pad, placing over all a bandage of elastic webbing whereby elastic pressure is made upon the wounded parts, and due provision made for the absorption of discharges.

A Remarkable Work.—

The year 1890 was remarkable for the publication of an ancient and long-lost treatise on Hindu Medicine by Banga Sen, who is extensively quoted in all standard works on Hindu medicine. The editor, a distinguished native physician of Shar Beri in the remote district of Rohtak, in the Punjab, says that he could not procure a complete manuscript anywhere, but had to work on odd chapters from different families of Vaidyas in India.

Men and Women.—

Twice as many women as men are afflicted with neuralgia.

Men are more liable to insanity than women, but, after becoming insane, die sooner.

Phthisis and pneumonia are more frequent and fatal among men than among women, while cancer and apoplexy kill more women than men.

The Fats of Human Milk.—

In *Zeitschrift für Biologie*, Ruppel gives the results of a very careful analysis of the fatty constituents of human milk. He concludes it is relatively pure in volatile fatty acids. The fixed oils consist of nearly fifty per cent. of oleic acid. Of the fixed solid oils, myristolic and palmitolic prevail over stearoleic acid.

The Thief Cries "Stop Thief!"—

Always beware of the one who cries "quack" the loudest, and don't let him get a chance at you in the dark. It has been truly said that good, earnest doctors are too busy to get time to slander their rivals. The truly good and the truly great do not detract from the reputation of others.—*Alkaloidal Clinic.*

Race and Eye Troubles.—

Blindness is very common in Finland, Lapland, Upper Russia, and other districts of the extreme North, and is attributed to smoky huts.

So, too, disease of the eyes is the curse of the Germans, for there are at present in Germany 37,800 blind persons.

Vesical Calculus.—

Stone is most prevalent in Iceland, the character of the drinking-water being supposed to have something to do with the frequency of the disease.

Goitre in France.—

There are 420,000 people in France affected with goitre.

Book Reviews.

LITTELL'S LIVING AGE. Price, 15 cents; $8.00 per year. Littell & Co., Boston.

There is no magazine that maintains a more uniform or higher degree of literary excellence than the old, well known weekly eclectic, *Littell's Living Age*. Its selections are taken from the leading foreign quarterlies, reviews, and magazines, with the truest judgment, and in its variety there is something for every cultivated taste. "The Outskirts of Europe," by J. D. Rees; "A Greek Courtship," by F. M. F. Skene; "Surgery and Superstition," by Frank Rede Fowke; "The Rajahs of Sarawak," by Hughues Le Roux; "The Question of Korea," by Henry Norman; "Time-Gauge of Niagara," by Thos. W. Kingsmill; "The Hadramut: A Journey in Southern Arabia," by J. Theodore Bent; "The Buried Elephants in the Arctic Regions," by D. Gath Whitley; "Hobbes," by Frederick Pollock; "Mr. Ruskin as a Practical Teacher," by M. Kaufman; "The Khedive of Egypt," by Stuart Cumberland—are some of the many valuable papers contained in recent issues, and constitute about one-third the number of those republished during any four weeks. To busy men and women who wish to be informed in regard to current English periodical literature and have the best papers, the most representative, profitable and entertaining, culled for them by a competent hand, the *Living Age* is indispensable. New subscribers for 1895 are promised the thirteen weekly issues for the current quarter free.

YOUTH'S COMPANION CALENDAR. Published by the *Youth's Companion*, Boston.

This is composed of three sheets, each one of which contains a magnificent picture well worthy of preservation by framing. This is in line with the usual enterprise of this most popular publication—the only publication which really fulfills the requirements of a practical family paper, one that is equally enjoyable to old and young, and at the same time utterly devoid of a single objectionable feature.

The *Youth's Companion*, moreover, is the most enterprising literary publication in North America. The best writers of all kinds are constantly engaged for its columns, and the prizes that it gives for contributions would make some of our "high-toned" magazines purple with apoplectic envy. Whether a politician, a member of a profession, a laborer, or an idler, the *Youth's Companion* appeals to all; and its sound, practical editorials, shorn of the sophistry and verbiage of politics, deal frankly and fairly with the questions of the day; every utterance may be accepted without reserve. During 1895, up to March 1st, this journal offers magnificent prizes for short original stories, viz.: $500 each for the two best, $250 each for the third, fourth, fifth and sixth in merit, $100 each for the seventh to the eleventh.

Subscribe now and receive the numbers from November 1st to January 1st *gratis*.

THE NEW SCIENCE REVIEW. Price, 50 cents; $2.00 per year. The Transatlantic Publishing Co., New York.

The reception of the second issue of this quarterly has been most gratifying. It fills a place between the *Popular Science Monthly* and actual abstruse science. The issue for October contains: "Fluorescence or Phosphorescence," by Professor James Dewar; "What Electricity Is," anonymous; "Mental Training—A Remedy for Education," by William George Jordan; "The Blood Stains on the Holy Coat," by Emile Gautier; "Sanitary Delusions," by Felix L. Oswald, M.D.; "The Pendulograph," by John Andrew; "What is Science?" compiled by Mrs. H. O. Ward; Tolstoi's "What to Do," by Henry Wood; "The Influence of Heat and Cold upon Microbes," by Lawrence Irwell; "A Remarkable Book, and its Teachings," by Wentworth Lascelles-Scott; "The Battles of Science," by Charles Barnard. There are also "Echoes from the British Association," a "Report on the French Association Meeting," another on "The Liquefaction of Hydrogen," and one on the newest explosive—"Schnebelite." "The New Element of the Atmosphere" is considered by Professor Dewar, and "Current Scientific Discussion" by Professor Angelo Heilprin.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 a year. J. B. Lippincott Co., Philadelphia.

The complete novel in the November issue is "Dora's Defiance," by Lady Lindsay—it is a brightly told story of a lady who could find no interest in life until it came too late to be taken in the conventional way. Other tales are: "An Arizona Speculation," by Mary E. Stickney; "In the Bitter Root Mountains," by Ella Higginson; "Rector Warne's Heresy," by Gillam W. Ford; "The Man who Died at Amdheran," by Virginia W. Cloud; "The Roses," by Fanny E. Newberry. Under the heading "Ten Dollars a Day—No Canvassing," Philip G. Hubert, Jr., discusses some queer circulars and the dubious opportunities of wealth they offer. W. S. Walsh

collects a number of interesting anecdotes of individuals who have gone about "Incognito." E. J. Gibson explains the labors of "The Washington Correspondent;" and Frederic M. Bird discourses on "Magazine Fiction and How Not to Write It." "Bargaining in Russia" is by Isabel F. Hapgood; "Rabbits in New Zealand," by J. N. Ingram; "My Schools," by Richard M. Johnston; "Old New York Restaurants," by Edgar Fawcett. The poetry of the number is by Albert Payson Terhune, John B. Tabb, and William H. Hayne.

DEMOREST'S FAMILY MAGAZINE. Price, 20 cents; $2.00 per year. W. Jennings Demorest, New York.

The November number is especially interesting. The article on "The Queen of Korea" gives glimpses of many unique things behind the scenes in the palaces of "the hermit kingdom," and the numerous illustrations (many from drawings by Korean artists) bring the far away little kingdom very near. Those interested in getting up church entertainments should not fail to read "Living Pictures for Amateurs," which gives minute directions how to arrange easily and quickly; and an illustrated article on "Harvest Decorations," for churches, will be found very useful at the Thanksgiving season. All the stories are especially good; in "Society Fads" and "Chat" one may learn all the latest doings of the "Four Hundred;" an excellent article on "The Breath of Life" is in "Sanitation;" "Household" and "Home Art" will aid the house-mother in her autumn preparations; the charming illustrations are a treasure-trove, and the oil picture, "Just My Pie," will appeal to every lover of pumpkin-tart. Every member of the family is sure to find something of individual interest in every number of *Demorest's*.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 per year. Charles Scribner's Sons, New York.

The November number has for its leading article one of especially timely interest on "Election Night in a Newspaper Office," by Julian Ralph. Other articles are: "English Railroad Methods," by H. G. Prout; "The Horse," by N. S. Shaler; "Requiem," by Harrison S. Morris; "True Pictures Among the Poor:" "The Bells of Aberdovey," by Robert Howard Russell; "Korbey's Fortune," by William T. Elsing; "A Tenement-Court Festival," by Edward W. Townsend; "The End that Crowned," by James Barnes; "The American Girls' Art Club in Paris," by Emily Meredyth Aylward; "How Whalebone Caused a Wedding," by Joel Chandler Harris; "The King of Currumpaw," a wolf story, by Ernest E. Thompson; "The Third Relief," by George I. Putnam; "The Conqueror," by Bessie Chandler; "John March, Southerner," Chapters LXX–LXXVIII, by George W. Cable; "The Point of View"—A Yankee Stronghold—Hymns—Wanted: A Political Newspaper—The Wages of Address.

THE DELINEATOR. Price, 15 cents; $1.00 per year. The Butterick Publishing Co., Limited, New York.

The "Thanksgiving Number" presents a varied table of contents. The fashions for November are more attractive than usual. An illustrated paper on "Evening and Dinner Dresses" supplements the regular articles. Other appropriate contributions are "The Thanksgiving Dinner," "A Thanksgiving in New England," "Table Decoration," and "How to Serve Apples and Pears." The initial papers of two new series appear in this number: one treats of "The House;" the other of the "Relations between Mother and Son." Fascinating employment is provided in "Venetian Iron Work" and "The Uses of Crepe and Tissue Papers." Mary L. McClintock writes of the "Woman's College of Baltimore," and Lucia G. Runkle on "Private School Teaching as an Occupation." "What to Do in Illness" contains good advice. There are also the usual "Tea-Table Talk," and papers on "Crocheting," "Knitting," and "Netting."

THE ATLANTIC MONTHLY. Price, 35 cents; $4.00 a year. Houghton, Mifflin & Co., Boston.

The November number contains: "The Trumpeter," first installment, by Mary Hallock Foote; "Seward's Attitude toward Compromise and Secession, 1860–1861," by Frederic Bancroft; "From My Japanese Diary," by Lafcadio Hearn; "The Growth of American Influence over England," by J. M. Ludlow; "Rosa," by G. Pitrè; "Indian Summer," by John Vance Cheney; "Reginald Pole," a serial, (first half), by Harriet Waters Preston and Louise Dodge; "Boswell's Proof-Sheets," by George Birkbeck Hill; "Hadrian's Ode to His Soul," by William Everett; "The Kitten," by Marion Couthouy Smith; "Maurice Maeterlinck: A Dramatic Impressionist," by Richard Burton; "Tammany Points the Way," by Henry Childs Merwin; "The Academic Treatment of English," by H. E. Scudder; "Whittier's Life and Poetry;" "America, Altruria, and the Coast of Bohemia;" "Comments on New Books;" "The Contributors' Club."

THE AMERICAN NATURALIST. Price, 35 cents; $4.00 per year. The Edwards & Docker Co., Philadelphia.

The October number is exceedingly interesting. Doctor E. D. Cope writes upon "The Classification of Snakes," which is a very thorough and comprehensive paper, well illustrated; Doctor Manly Miles details "The Limit of Biological Experiment." Of more than usual interest is the paper on "Abalone, or Haliotis Shells of the California Coast," by Mrs. M. Williams. "The Duration of Niagara Falls" is discussed by Doctor J. W. Spencer. There are the usual very full notes upon Mineralogy, Geology, Palæontology, Zoölogy, Entomology, Psychology, and Ethnology. To anyone who is at all interested in science, this magazine is invaluable.

THE OVERLAND MONTHLY. Price, 25 cents; $3.00 a year. Overland Publishing Company, San Francisco.

The October number contains: "The Song of the Balboa Sea," by Joaquin Miller; "The Vigilance Committee of '56," by — Paul; "In the Burst of the Southwest Monsoon," by Rounsevelle Wildman; "Wood and Wave Notes," by Edith M. Thomas. Other notable articles are: "Fishing at Drake's Bay;" "The Republic of Shanghai," by Mark C. Dunnell; "The Korean Question," by General Lucius H. Foote; "The Story of the San Pablo Rancho," by John F. Sheehan; a bright California story by Horace Annesley Vachell; "She Had a Familiar Spirit," by John Bonner; poetry, etc., and book reviews.

THE MONIST. Price, 50 cents; $2.00 per year. The Open Court Publishing Co., Chicago.

The October number of this quarterly opens with a paper by Professor H. von Holst, querying whether the United States ought to be abolished; Professor Ernst Mach deals with "The Principles of Conservation of Energy;" Major J. W. Powell with "The Nature of Motion;" the editor, Doctor Paul Carus, with "Buddhism and Christianity;" Thomas Whittaker with "The Nature of Thought." There are the usual book reviews, criticisms and discussions by the editor, and literary correspondence by Lucien Arréat.

HIS VANISHED STAR. By Charles Egbert Craddock. Cloth; 12mo; pp. 394. Price, $1.25. Houghton, Mifflin & Co., Boston.

Miss Murfree's latest story carries the reader to the same "Great Smoky Region" of Eastern Tennessee which is the scene of her earlier novels. This volume gives intimate knowledge of the mode of life of the Tennessee moonshiners, some of whom are guilty of greater crimes than the distillation of liquor contrary to statutory enactment. The curious and contradictory emotional and intellectual workings of the nature of this class of individuals are closely analyzed. The principal characters are two rough backwoodsmen, a deputy sheriff, a "promotor," a surveyor, a distiller of illicit goods, and a mountain farmer with his son and two most attractive daughters. The latter are modest, stay-at-home maidens who marry men of their own region and thought-plane. In fact the whole work deals with people who are, so to speak, "out of the world."

The greatest charm of the volume is the wild and changing environment in which these people live; to this, love and hate may be added, along with a word-painting that is most realistic. We are brought face to face with storms, the mists, the valley views, the haunts of the deserted mine, with the owl and the panther, in a much more effective way than could have been done even with a photograph. Miss Murfree proves that she is truly an "artist in words." In those portions of the volume which are not devoted to dialect, her sentences have an exceedingly careful finish, a magnetic quality with concise expression that only comes from a carefully selected vocabulary and unusual faculty. This is not the style in general vogue, but it preserves the old tradition that the language of fiction should in itself be beautiful and artistic as well as adapted to the exposition of the characters embodied.

This is by long odds the best novel that has been placed upon our review table for many a day. We might go farther and say it is *the* novel of the year.

BREAD AND STONE. By Julius Hensel. Paper; 32mo; pp. 135. Price, 25 cents. A. J. Tafel, Philadelphia.

This little book introduces to the people of the United States a subject of vital importance in that it concerns the health of the human race. A part of the subject bears upon agriculture, and presents a new and rational system of land fertilization. Hensel notes what some day the entire world will find a fact, that in order to flourish well plants require healthy food as much as do man and beast, and that manure and compost of all kinds, though furnishing necessary chemical factors, do not conduce to healthy food.

Hensel goes back to the beginning in his

search for plant-food, and finds it in the primeval rocks. Such food will produce cereals, tubers, and fruits that are healthy, wholesome, and life-sustaining; then plants, being healthy, will escape disease and parasites, and many of the ills of man due to unwholesome diet will disappear. This is but a brief indication of the methods put in practice by Hensel and others with amazing success during the last five or six years. The claim is further made that the plan will not only save the husbandman a heavy expense for artificial fertilizers, but will gradually bring back his exhausted fields to a virgin state, and give to the public food on which health may be maintained. Finally, in this is to be seen one of the means by which the human race may be physically regenerated, and sound bodies provided for the shelter and development of sound minds.

THE BIOCHEMIC SYSTEM OF MEDICINE. By George Carey, M.D. Cloth; 8vo; pp. 444. Price, $2.50; sheep, $3.50. F. August Luyties, St. Louis, Mo.

This is certainly an unique volume even for this period, when "systems" of medicine seem to flourish on every hand. The author holds that "inorganic cell salts of the human blood unite with organic matter to form certain material for carrying on life's processes." One of the earlier chapters is devoted to this so-called cellular pathology. The author likewise claims a natural law of cure which he terms the "law of supplying deficiencies." We must frankly say that we fail to understand the work or to discover a physiological foundation for the same.—It is doubtful if the author himself understands it. It appears to be partially founded on homœopathic data, but is not fully in accord therewith. Unless we are very much mistaken, this is the volume which has caused considerable acrimonious dispute among the homœopathic profession, and particularly among homœopathic publishers. With this we have nothing to do, but we may add that the work is well worthy of perusal, since there is a great deal of material embodied that cannot fail to be of value, and that will also aid in broadening one's ideas regarding so-called specific methods of practice.

NORMAL HISTOLOGY. By George A. Piersol. Cloth; 8vo; pp. 439. Price, $3.50; sheep, $4.00. The J. B. Lippincott Co., Philadelphia.

The author presents descriptions which include the salient features of various structures with sufficient fullness to impress important details. It is indeed a complete and thorough manual, and as the subject of histology has rapidly advanced within the last decade it presents the results of the very latest thought and study. The chapters discuss respectively:

The Cell Tissues; Epithelial Tissues; Connective Tissues; Muscular Tissues; Nervous Tissues; Peripheral Nerve Endings; The Circulatory System; Lymphatic System; Mucous Membranes and Glands; The Digestive Tract; Urinary Organs; Male Reproductive Organs; Female Reproductive Organs; The Skin and its Appendages; Central Nervous System; The Eye and its Appendages; Organs of Hearing; Nasal Mucous Membrane.

Thus it may be seen the work is very thorough and complete.

HOME TREATMENT FOR CATARRH AND COLDS. By Leonard A. Dessar. Cloth; 16mo; pp. 118. Home Series Publishing Co., New York, N. Y.

This treatise has been prepared with a view of supplying the general reader with a guide of instructions in the care, prevention and treatment of catarrhal troubles of the throat, nose, and ears, and their complications. The enterprise is perhaps commendable, and it may be said there is a great deal embodied of value. Nevertheless we object decidedly to volumes of this character, since they tend to do harm rather than good. For instance, the instructions to the laity for using remedies for the ear and nose cannot but be pernicious. An ear-syringe in the hand of one not fully conversant with the anatomy of the auditory apparatus is apt to be highly dangerous. So too with regard to a great many other appliances which are here recommended, with instructions for their use.

ASIATIC CHOLERA. By John A. Benson, M.D. Cloth; 16mo; pp. 248. Price, $2.00. J. Harrison White Co., Chicago.

This brochure contains the lectures of the author delivered at the College of Physicians and Surgeons, Chicago, in the winter of 1892–93. No claim is made for originality, since the author himself states "the subject matter was compiled from a great number of sources."

Consequently there is nothing new in the volume, which, however, is a plea for the bacterial origin of cholera, and in a large degree special pleading in favor of Koch's methods. It is a very interesting *résumé*, and possesses an appendix presenting different cholera-mixtures that have at various times been recommended, a summary of mechanical means employed in the cultivation of the comma bacillus, and methods of treatment by hypodermoclysis and enteroclysis.

Therapeutic Brevities.

Phytolacca.—This is one of our best alteratives in secondary syphilis, scrofula, and some forms of skin diseases; but its special influence is upon the mammary glands. My experience with the drug, moreover, leads me to conclude that such influence also extends to the whole glandular system, notably to the testes. Given internally and at the same time applied as a poultice locally, there is no better treatment for orchitis, particularly when there is a tendency to suppuration. Of particular value is it in abdominal inflammations, especially in cellular tissues. In a case of pelvic cellulitis in which an operation whereby the abdomen would be opened and drained seemed necessary, it was decided to defer the operation for two or three days, and in the meantime an alterative with Phytolacca was ordered, also local poultices of ground Poke-root and bran applied and renewed every two hours. Under this treatment there was gradual improvement, which culminated in complete recovery; the ascitic fluid was absorbed and the induration gradually disappeared.

Like treatment relieved an old man of a tumor with pus-formation in the region of the cœcum.

In congestions and inflammations of the liver, especially where there is a tendency to the formation of abscesses, the remedy is invaluable; but to derive from it the greatest good it should be used internally, and externally in the form of hot poultices. For enlarged or suppurating glands, or where suppuration is threatened in any of the tissues, there is nothing that can take the place of Phytolacca. When the poultices have been used for a week or ten days the skin will show a peculiar mottled appearance that, once seen, will never be forgotten, and it is then the remedy is doing its work to the best advantage.—Doctor van Meter, in *California Medical Journal.*

Ferratin.—Germain Sée has employed this drug in a series of cases at the Hôtel Dieu. He declares it has a direct significance in the nutrition of the tissues, and even after prolonged use induces no derangement of the digestive tract, but, on the contrary, has a pronounced curative effect. It acts mildly as an astringent without causing objectionable excitement or constipation—disturbances that commonly follow the use of ordinary ferruginous preparations; it induces strong increase of appetite—always precarious and capricious in anæmic patients,—and also regulates the movements to normal. Above all, its administration is free from any unpleasant side- or after-effects.

Eight to twenty-five grains daily, in divided doses, proved it a valuable food product in that it excited appetite and afforded a powerful adjuvant to assimilation; besides it contains a fixed proportion of highly assimilable iron, and thus replaces a vital insufficiency; consequently it is indicated for those suffering from anæmia from hard work, though the patient have the appearance of good health; for those affected with chlorosis; those weakened by too rapid growth and puberty; those fatigued by study—in short, in all in whom a diminution of red corpuscles has ensued, due to no matter what causes.—*American Therapist.*

Exophthalmic Goitre.—Before the Canadian Medical Association Doctor Haldimand gave the clinical history of a case, the symptoms of which were solely exophthalmos and goitre of six weeks' standing. Tachycardia was lacking, which would seem to be peculiar, since it is agreed it should be ever present; neither were there other circulatory symptoms, such as throbbing of the carotids or flushing of the face. Nothing in the family or personal history of the patient (who was a barber twenty-seven years of age) could account for the disease; with the exception of a few attacks of gonorrhœa, he had never been ill. Auscultation revealed a slight systolic murmur, and the pulse was found to be somewhat irritable. The treatment employed was eight minims of tincture Belladonna three times daily, under which the goitre rapidly diminished.—*Canadian Practitioner.*

Ashes in the Treatment of Wounds.—Doctor Pashkoff, in *Novosti Terapii*, emphatically recommends dressing recent wounds of any kind with a thin layer of ashes prepared *ex tempore* by incinerating some cotton, stuff, or linen. He says dirty-looking wounds should be previously washed out with a boracic lotion. The ashes, with blood, form a protecting scurf under which the lesion heals very rapidly. Of twenty-eight cases of cuts, crushes, stabs, etc., treated after this method, twenty-six quickly healed without any trace of suppuration.

[This simple, convenient, and cheap method has been practiced by the Cossack peasantry from time immemorial, and is by no means unknown to certain backwoods sections of the United States.—Ed.]

Spasmotin.—This new derivative of ergot appears to be identical with Spacelotoxin, and derives its title from the fact that it induces spasms of the small arteries; it is also said, like ergot itself, to have a stimulating effect on the pregnant uterus. Its sodium salt is said to be most satisfactory for subcutaneous use, as it does not induce any form of local disturbance, yet yields the same effects as those obtained with ergot. The doses employed thus far have ranged from one-quarter to two-thirds of a grain, though as high as fifteen grains have been given without any inconvenience. Definite therapeutic data are as yet wanting, however.

Passiflora for Insomnia.—Doctor F. J. Boutin declares that in persistent wakefulness he has used Passion Flower tincture in doses of thirty drops, repeated every half-hour as necessary, with very great satisfaction. Usually but two doses are required, and on the second night the repetition demands a smaller quantity, which is contrary to the rule for the employment of such drugs. On one occasion he himself—being awakened several times during the night—took 190 drops between 10 P.M. and 4.30 A.M. without any unpleasant effects whatever.

Hydrastis Canadensis in Obstetrics.—Bossi, of Genoa, finds that the fluid extract Golden Seal has a constant curative and prophylactic hæmostatic action on the uterus during pregnancy, labor, and the puerperium, without any ecbolic effects or modification of the uterine contractions. It is infinitely preferable to ergot for either hospital or private use. It is also applicable to all irritable, inflammatory and ulcerative conditions of the mucous tract.—*Nouvelles Archives d'Obstét. et de Gynécologie.*

Caulophyllin.—This is considered an effective anthelmintic and emmenagogue. While of some use as an antispasmodic, probably by inducing contraction of the capillaries, it contains no astringent constituents, but tends rather to a laxative effect. Most peculiar is its specific action in cases of threatened abortion, where it almost immediately stops uterine contractions. It is also an excellent uterine tonic. The dose is one to four grains repeated according to circumstances.—*Medical Summary.*

Acetanilid in Hard and Soft Chancre.—Doctor Bazilevitch has employed Acetanilid in numerous cases of chancre, with most satisfactory results, and declares it has the great advantage of cheapness, with freedom from odor and danger; the drug should be reduced to a very fine powder and freely applied twice daily. It is also very useful in simple ulcers, and, from its analgesic properties, especially valuable in those of the painful varicose variety.—*Provincial Medical Journal.*

Pilocarpine in Alcoholism.—In alcoholism, Doctor Josham recommends one-third grain doses of Pilocarpine hypodermatically, and declares its "sobering effects are remarkable;" sleep ensues, and the patient wakes up a perfectly rational being. "The tense, red, bloated countenance and bleared, congested eyes pass away, the features become calm and easy, the skin soft and clear.—*Provincial Medical Journal.*

Circumcision for Incontinence of Urine.—A boy ten years of age had a precipitate way of passing his urine; had a great deal of trouble at school on that account, as he had to run out all at once. I found his trouble was due to a tight prepuce, and he was at once relieved by circumcision.—Doctor C. W. Shaw, in *Pittsburgh Medical Review.*

Chloroform Treatment of Phthisis.—In the *Journal de Médecine de Paris* Mr. Potter urges that by the inhalation of Chloroform the bacillus of tuberculosis is destroyed *in situ.* It is not necessary to produce anæsthesia, but short of this inhalations should be employed at brief intervals daily for a considerable period.

Anæsthesia for Extraction of Teeth.—

℞ Chloral hydrate, 8 grains.
Cocaine hydrochlorate, 4 grains.
Acid carbolic, 5 minims.
Water, 2 ounces.

Inject five to eight drops of this preparation into the gums, and wait five minutes before extracting.—*American Doctor.*

Rhus Aromatica in Urinary Incontinence.—The juice and tincture of the leaves of this plant have been administered with good effect by M. Eloy, in doses of from ten to twenty-five minims.—*Fortschritte der Medicin.*

To Give Cod-liver Oil.—The best time to administer this restorative is either just before or immediately after eating.

Medical Progress.

PATHOLOGY AND TREATMENT OF PRURITUS VULVÆ.*—Abnormal sensibility of the structures forming or immediately adjoining the external genital orifice, although a symptom common to several diseases, in many cases assumes a distinctive character. In some of these instances this condition may occasion an intensity of mental, as well as of physical, discomfort, or give rise to difficulties greater than are met with in any other of the so-called minor ailments in gynæcological practice.

Of the vulvar complaints none come more frequently under observation, or are of greater practical interest, than pruritus of the pudendum, not only from the immediate trouble thus occasioned, but also from its possible significance as a symptom of uterine cancer or of diabetes, or other constitutional disease. Nor is even purely local pruritus of the external genitalia of such trivial consequence as it is sometimes regarded, being, on the contrary, when neglected or injudiciously treated, of wider importance as a frequent factor in the causation of nymphomania, or of the gravest forms of hysterical or cerebro-nervous disorders.

In some instances the causes of vulvar pruritus must be sought in constitutional diseases beyond the scope of consideration in the present communication. It may, however, also arise from direct local irritation occasioned by the acrid secretions of the vulvo-vaginal glands, which secretions may accumulate, decompose, or become possibly the seat of pathogenic micro-organisms. Moreover, it may originate from neuromata or from serpiginous ulceration, or from subacute inflammatory disease of the vulvar mucous membrane, as is frequently evinced in catarrhal or specific vulvitis and vaginitis. Again, in many instances pruritus is an accompaniment of pregnancy, whilst in others it is consequent on the general genital hyperæmia that ushers in the catamenial periods or that attends the menopause.

In dealing with a condition so many-sided in its ætiology as this, the recognition, and if possible the removal, of its exciting cause, whether that be constitutional or local, should be the chief object. As this truism is very commonly ignored, I may venture to repeat that its practical importance is daily illustrated by cases in patients of neurotic diathesis or suffering from diabetes, or from carcinoma uteri, in which merely local measures are frequently vainly relied upon. If, therefore, as so often happens, vulvar pruritus be distinctly connected with a constitutional neurotic condition or hysterical temperament, primary attention should be given to the abatement of that condition by appropriate nerve tonics and sedatives, such as the hydrobromates of iron and quinine, bromide of potassium, and hydrobromic acid in combination with valerian. If the pudendal irritation be symptomatic of uterine cancer, surgical interposition, if practicable, affords the only remedy, and if that be beyond possibility then the general methods of palliative treatment will be equally applicable. In cases wherein vulvar irritation results from renal disease, no remedy affords more general relief than salicylate of soda, provided it be given in full doses, and that the *natural* salicylate be employed.

Even in cases just referred to, much may be done to palliate symptomatic irritation of the external genitals by the judicious use of some of those locally-employed agents which are still more effective in the ordinary or primarily vulvar forms of pruritus, although in these also some constitutional medication should be generally conjoined with whatever local treatment may be required. For the latter purpose the first point is to secure the thorough asepsis of the affected parts by frequent ablutions with hot water (120°) and either coal-tar soap or some antiseptic superfatted soap. Immediately after this the vulva should be freely swabbed over with some efficient antiseptic solution, *e.g.*, corrosive sublimate (1 to 1000), boric acid (1 to 25), or carbolic acid (1 to 40), so as to destroy any pathogenic micro-organisms that may have escaped the previous ablution, and thus prepare the pruritic surface for the local sedative application that must be then employed.

Of the countless remedies of the latter class that I have tried, none has proved more generally serviceable than Methylene Blue, which I have now employed in a considerable number of cases of this kind in my hospital practice during the past season. In these instances the local application, at frequent intervals, of a strong solution was commonly conjoined with its internal administration in grain doses in pill form, twice or thrice daily, until the complaint was relieved, except in some cases where this remedy produced strangury and had therefore to be discontinued. The chief objection, however, to the use of methylene blue is the inevitable staining of the parts as well as of the linen and fingers of the patient by whom it is locally employed; and even when only given by the

*Abstract of paper by Thomas More Madden, before the British Medical Association.

mouth the blue-stained urine speedily produces a similar discoloration of the vulvar structures. That circumstance, trivial as it may seem, I have found sufficient to prevent many of those for whom in private practice I have prescribed this remedy from persevering sufficiently long in its use. When, therefore, methylene blue is thus inapplicable, or where it either fails or ceases to give relief in the local treatment of obstinate pruritis, we must then fall back on those older sedative applications on which the changes must be rung until the disease subsides or until its exciting cause may be dealt with.

Amongst the many topical remedies thus employed, one of the most effectual is Cocaine in five-per-cent. solution with peppermint-water, or in the form of a cream in combination with equal parts of menthol, powdered camphor, and chloral. Other often no less useful applications are a twenty-per-cent. solution of boric acid, or a lotion with hydrocyanic acid, borax and morphia in the carbonated solution of camphor.

PATHOLOGY AND TREATMENT OF VAGINISMUS.—Abnormal sensibility attended with spasmodic contraction of the vulvo-vaginal orifice often comes under observation as a cause of dysparunia. In such cases the local hyperæsthesia is evinced on any attempt at examination, and is most marked about the meatus urinarius or in the vicinity of the vulvo-vaginal glands and fourchette whence the hymen or its remains project upwards.

Without referring here to the different theories which have from time to time prevailed with regard to the general causation of vaginismus, or to the minor cases of this complaint which are commonly sufficiently relieved by the topical application of methylene blue, cocaine, or other local analgesics, confining myself to the ætiology and treatment of those graver forms of vaginismus occasioning dysparunia which require more serious remedial measures, I would presume to express my opinion, founded on somewhat extensive experience, that in the great majority of these instances the complaint is not only very intimately connected with the constitutional neurotic temperament generally evinced by such patients, but also that, hardly less frequently, it is also largely ascribable to a special local lesion, viz., an abnormal condition, or neuritis, affecting the trunk or terminal fibrillæ of the pudic nerve, one branch of which supplies the structures in the vicinity of the clitoris, whilst the other, or superficial perineal nerve, is distributed to the labia as well as to the perineum in which its terminal branches ramify.

In the recognition of the two points just referred to will, I believe, be found the key to the general treatment of this complaint, in which, as in many other gynæcological disorders, the importance of the constitutional neurotic element in the causation and treatment of the local disease is too commonly lost sight of. In all such cases the best therapeutic results may, therefore, be obtained by those practitioners who, recognizing the general connection of constitutional causes with topical lesions, are alive to the necessity of combining the employment of nerve tonics and other appropriate general remedies with the local measures that may be specially required in each case.

The local treatment of vaginismus may be successfully carried into effect, in a large proportion of cases, by such forcible dilatation of the vulvo-vaginal passage as may effectually and permanently overcome its abnormal contractility and at the same time produce thorough stretching of the affected nerve fibrillæ. For this purpose, in the first place the patient, previously prepared by the customary syringing and other antiseptic precautions for a vaginal operation, and her bowels and bladder evacuated, should be placed in the ordinary left lateral semi-prone position on a suitable couch, and put under anæsthetic influence. Secondly, a large-sized bivalve vaginal speculum is to be introduced and the blades then expanded to the fullest extent. Thirdly, a tampon of antiseptic cotton or wood wool, saturated in boracic glycerin, should be passed in through the speculum so as to fill its calibre from the vulva to the roof of the vaginal vault. Fourthly, the speculum still widely expanded is to be forcibly withdrawn, in order, as before observed, to overcome the contractility of the parts and thoroughly stretch or even slightly rupture the affected nerve fibres. In so doing, some little abrasion of the vaginal walls may probably be occasioned, but any hæmorrhage therefrom will be sufficiently controlled by the tampon, on which counter-pressure is to be made during removal of the speculum so as to leave the included plug behind in the vagina, where it must be left for at least twenty-four hours, and then replaced by other tampons—to be retained for a similar period—for the next week, to maintain the patency of the passage. On each occasion after the removal of these tampons the vagina must be thoroughly washed out with some antiseptic injection. Finally, should any trace of vaginismus or spasmodic contraction still remain at the end of a week or

so, then the same procedure may be repeated, after which the original passage will have generally regained its normal sensibility and capacity.

In some exceptional instances this curative result may not be thus obtainable, and in such cases it may become necessary to resort to one or other of the various methods, such as the excision of any specially hyperæsthetic tissues in the vicinity of the hymen or its remains, etc., or else to some of the recent modifications of Sims' or Emmet's operations for vaginismus. These procedures will, however, as I believe, comparatively seldom be required by gynæcologists who adopt the simpler and generally effectual plan of treatment now described.—Abstract of paper by THOMAS MORE MADDEN before British Medical Association.

PATHOLOGICAL CHANGES IN MUCOUS MEMBRANES.—Mr. D'Arcy Power exhibited to the British Medical Association a series of preparations of the conjunctival and vaginal mucous membranes taken from rabbits and guinea pigs which had been subjected to mechanical and chemical irritation. Many of the epithelial cells presented appearances which were identical with those described as being parasitic when they were met with in cancer. The changes in the epithelium were summarized as a general vacuolation of cells; various forms of intra-cellular œdema; epithelial "pearls," collections of leucocytes, and the spaces left after these leucocytes had migrated. The series of preparations shown on the present occasion indicated that many squamous epithelial cells had the power of phagocytosis, for in no other way could the remarkable intra-cellular appearances be explained; cells were shown containing a leucocyte, and others containing a microcyte. Partial necrosis of the cell also took place as a result of irritation, and there was an invasion of large eosinophile cells into the conjunctival epithelium.—*Nature.*

PERFORATION OF THE UTERUS BY CURETTE.—Alberti, of Potsdam, in *Centralblatt für Gynäkologie*, relates a case in which the curette was used in the removal of some fœtid membranes after abortion in a patient aged thirty-two. In drawing down what he thought was relics of decidua, he found that it was a coil of intestine. He applied the tampon around the gut, sent the patient to a hospital, and three hours later Alberti performed abdominal section. There was a rent about an inch long in the right cornu uteri, occupied by a coil of small intestine which was held tightly by the os internum, whence it had to be liberated by a hernia knife. The strangulated intestine was over six and a half inches long, distended, hyperæmic, and very dark at the line of constriction. The uterus was very soft, and exceedingly thin around the perforation. It was closed with four Lembert sutures. The patient made a good recovery, and has remained since in excellent health.

THE EFFECT OF ETHER AND CHLOROFORM ON THE KIDNEYS.—After the examination of the urine in 125 cases, before and after anæsthesia, Wunderlich draws the following conclusions:

An already existing albuminuria is often increased by etherization; no such case in which chloroform was given was observed:

Albuminuria can be caused by narcotization with chloroform and ether, more often with chloroform, the relative frequency with which it occurs after the use of chloroform and ether being as 11.5 to 6.9:

As a result of the use of chloroform, casts may appear in the urine; this is less frequent after the use of ether,—the relative ratio of frequency is 34.8 to 24.6:

When casts are already present, both anæsthetics have the effect of increasing the number.—*Annals of Surgery.*

THE VAGUS AND THE SECRETION OF ACID BY THE STOMACH.—Leubuscher and Schafer, who are duly corroborated by Pawlow, Schumova, and Krehl, have proved by experiments that section of both vagi below the recurrent laryngeal nerves induces waste, loss of appetite, and ultimate death. In animals in which such section was performed no free hydrochloric acid was found in the stomach, and the gastric juice exerted little digestive action.—*Centralblatt für Innere Medicin.*

KANTÉ.—This is the native name of the Indian plant *Hydnocarpus ebrians*, the oil of which is largely employed both internally and externally in the treatment of leprosy. From ten drops to two or three drachms are put in boiling milk, and ingested when cooled to the drinking-point. The oil is also thoroughly applied to the entire surface of the body and effectually rubbed into the parts most affected. Those who have employed it express great confidence in its virtues, but give no report of results.—*Medical Times.*

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Original Articles.

YELLOW FEVER.*

BY DOCTOR JOAO VINCENTE TORRES HOMEM.

(*Continued from page 652.*)

XII. Yellow fever may be confounded with the bilious remittent fever of the tropics. That pyrexia, as already stated, often assumes the highest gravity; it presents in its array of symptoms frequent bilious vomiting; the bile coming from the stomach appears dark, and may even be mingled with a little blood. There are patients who, together with grave bilious and nervous symptoms, are attacked by some hæmorrhages—by epistaxis, for instance, and especially by hæmaturia; some authors term this nosological species *hæmaturic bilious fever, yellow fever of the acclimated.* In some cases we observe albuminuria also, even though the urine be not bloody; ataxo-adynamic symptoms appear, and often the patient dies as in yellow fever, presenting on the skin a very intense and diffused saffron-yellow color.

The circumstance of a yellow-fever epidemic prevailing should be taken well into account by the physician in establishing the differential diagnosis. The bilious remittent fever of the tropics, even the hæmaturic form, is an essentially malarial disease—it is a very acute and grave manifestation of malarial infection,—we should consequently find in the patient noteworthy changes on the side of the liver and spleen, the chosen seats of this infection. From the beginning the type of the fever is frankly remittent, the thermometer indicating evening exacerbations and morning depressions of febrile heat. The functions of the hepato-biliary system are deranged as soon as the first morbid phenomena are manifest; hence comes the early jaundice which widely and unequivocally betrays itself within the first forty-eight hours. The disorder bears the impress of gravity in its first manifestations; thus appear very promptly delirium, insomnia, restlessness, and dryness of the tongue.

The profound disorders of the biliary function of the liver are accompanied by great enlargement of this organ, by some increase of size of the spleen, by bilious vomiting from the commencement of the disease, and commonly by diarrhœa, also of bilious character. As in every grave malarial fever, ataxo-adynamic symptoms enter on the scene before the close of the first week. Although in some cases we observe hæmorrhages, they are very rare, and that manifested by preference is hæmaturia; gastrorrhagia is an exceptional phenomenon. Black vomit does not ordinarily depend on the presence of blood in the matters rejected by the stomach, but rather on cholepyrrhine, or dark bile-pigment, which is mingled with the fluids of the stomach, or is present there alone. When albuminuria appears, the disease has reached a very advanced stage of development and is on the point of terminating fatally.

Finally, the bilious fever of the tropics, when it assumes the pernicious form, rarely terminates by death before the second week or by recovery before the third.

Yellow fever is not a pyrexia of exclusively malarial basis; it does not present in the number of its initial symptoms congestion of the liver and spleen. The remittent type of the fever does not evince the same regularity observed in the other pyrexias. The fall of temperature characterizing the second stage, or the stage of transition, does not occur in bilious fever. Well marked and diffuse jaundice appears tardily, in the course or at the end of the third stage, and at times only after death. The grave nervous symptoms are manifest only in the third stage, particularly in the ataxo-adynamic form; in the hæmorrhagic form the patient often dies

* Translated by Surgeon George P. Bradley, U. S. N.

without presenting any symptom of ataxia. The tongue rarely becomes dry, and when this occurs it is after the third stage supervenes, and almost never in the first days of the disease, as I have already taken occasion to say.

The bilious vomitings are generally preceded by watery and mucous ones, and appear from the second to the third stage; the vomiting of the first stage almost always coincides with a furred condition of the tongue, indicates gastric derangement, and disappears after the use of an emetic.

Diarrhœa in yellow fever is a very rare exception, while in bilious fever it is the rule. Delirium is the only nervous symptom observed at the commencement, and in this case depends upon hyperæmia of the cerebral meninges. Hæmaturia is an infrequent hæmorrhage, and when it manifests itself is attended by other hæmorrhages. In bilious fever, stomatorrhagia, epistaxis and enterorrhagia almost never appear; hæmaturia commonly is present alone.

The black vomit in yellow fever is composed of blood; albuminuria supervenes, in this affection, from the second to the third stage, and does not bear the least relation to its gravity, as also it has not the slightest influence on its termination. Anuria is a frequent symptom in yellow fever, and is very rare in bilious fever. Finally, the course pursued by the former of these two pyrexias is much more rapid than that pursued by the latter, whether death or recovery takes place.

Each one of these elements of differential diagnosis, taken by itself, certainly does not deserve the least confidence; but when they are found united they have much importance, and will concur efficaciously to dissipate the physician's doubts. Nevertheless it must be admitted that in an epidemic of yellow fever some cases of bilious remittent fever of the tropics may present themselves which are so confounded with the prevailing disease, receiving in their symptomatic expression the preponderant influence of the medical constitution, that differential diagnosis will become extremely difficult if not even impossible.

Case 1.—Joao Maria Feitosa, Portuguese, twenty-six years old, without occupation; arrived in Brazil but thirty-five days before; was seized with regular paroxysms of intermittent fever on the 28th, 29th and 30th of April, 1873, to combat which he took large doses of quinine, given by Doctor Godoy Botelho.

On the 1st of May, the fever again appearing, and now being attended by very intense headache, he resolved to enter the Mizericordia Hospital, and at 5 P.M. was assigned to the Santa Izabel ward. The physician on duty prescribed a purgative of calomel, and sinapisms to the lower extremities.

May 2d. Face flushed; eyes injected, weeping and sensitive to light, orange-yellow color of palpebral conjunctivæ, expression languid; great hyperæmia of capillaries of anterior chest-wall. Very intense supra-orbital headache; pains in loins and legs, which render difficult the patient's moving in bed. Axillary temperature 105.2°; pulse 122; skin very dry; tongue coated, but large and moist; great thirst; anorexia; no nausea or vomiting; some sensitiveness of epigastrium; liver and spleen normal; belly soft. The purgative produced three stools. Urine very scanty, red, acid, and without albumen. Some dyspnœa; absence of abnormal physical signs in respiratory organs. Ordered mustard foot-bath, and sinapisms to extremities; also

℞ Acetate of ammonia, 20 grammes.
Tincture of aconite, 2 grammes.
Tincture of belladonna, 15 drops.
Syrup of orange-flowers, 30 grammes.
Laurel-water, 12 grammes.
Water, 150 grammes.
One tablespoonful every hour.

At 5 P.M. the patient was much prostrated, with temperature of 105.6°, not having urinated since the morning visit.

3d. Sub-jaundice of conjunctivæ, chest, throat, arms, and legs; prostration of strength; headache; pain in the loins and legs not intense. Axillary temperature 103.8°; pulse 120. Tongue furred and moist; epigastrium still sensitive, no vomiting; liver and spleen of normal size; bowels tense, constipated, painless. Suppression of urine,—catheterism did not yield a drop of urine. Ordered a mixture containing one gramme of quinine and ten drops of laudanum, to be given in tablespoonful doses hourly; lime-juice lemonade as beverage; a purgative enema; stimulant frictions to lumbar region. At 5 P.M. the patient was found with epistaxis, still with anuria, and delirious; the axillary temperature was 100.6°, pulse 130; had not vomited.

4th. Sub-jaundice general; adynamia; temperature 99.6°; pulse 130. Epistaxis; the blood flowing from the nasal fossæ is black and diffluent. Tongue spotted with

blood, moist. Palpation and percussion of the epigastrium demonstrate that the stomach contains a large amount of fluid. Shortly after leaving the patient, the students called me and showed a large quantity of black matter he had vomited, mingled with a greenish fluid; at the time of vomiting the nasal hæmorrhage increased. The anuria continued—patient had not urinated from 9 A.M. of the 2d (forty-eight hours). Sub-delirium, alternating with groans and sighs. Ordered:

Gallic acid, 2 grammes.
Ergotin, 4 grammes.
Diacodium syrup, 30 grammes.
Water, 150 grammes.
One tablespoonful hourly.

Also, a small blister to epigastrium; iced lemonade; an enema containing musk, camphor, tincture of valerian, and electuary of senna; stimulant frictions to region of kidneys.

The black vomit continued until 3 P.M. and then ceased; the epistaxis continued up to the visit of the interne at 5 P.M. The patient at this time was losing much blood, not only from the nasal fossæ, but from the gums; was prostrated, with cold extremities; temperature 98.2°; pulse 136. According to my recommendation a mixture was prescribed containing two grammes of the standard solution of perchloride of iron; a mixture of tannin and powdered resin to be introduced into the nasal fossæ. At 11 P.M. the patient died, having had a little before death a large evacuation of a black and fœtid fluid holding in suspension a pulverulent substance similar to coffee-grounds.

Autopsy (eleven hours after death): Saffron-yellow color of external surface of body; upon the upper lip, nasal pyramid, and angles of the mouth and chin, are noted spots of blood and small blood-clots. Some hyperæmia of pia mater and brain-substance; dura mater and arachnoid stained yellow; slight sero-sanguineous effusion in lateral ventricles. Old pleuritic adhesions at base of right lung; well marked congestion at base of both lungs. In the heart was merely noted the presence of a soft and friable blood-clot, occupying the left ventricle and prolonged to the aorta; the tissue of the myocardium pale, bleached, and a little softened. The cavity of the stomach contained one-and-a-half ounces of dark fluid, holding in suspension black clots which broke down easily under pressure with the finger; the gastric mucous membrane, after washing in a large quantity of water, appeared injected, with some ecchymotic spots in the part corresponding to the greater curvature of the organ. In the duodenum and the rest of the small intestines nothing noteworthy presented except some hyperæmia of the mucous membrane. The liver, a little enlarged, presented three distinct colors on its surface—bronze, dark yellow, and red; dividing its parenchyma, the surfaces of the section appeared of a more or less deep yellow color, dry and granular. A bit of the liver, taken from the *lobus Spigelii*, reduced to very small fragments, and mixed with a little ether in an hermetically sealed vessel, left in solution in this fluid a certain amount of fat, very appreciable after the solvent was evaporated in a small capsule. The gall-bladder was contracted, containing little bile, and that much thickened. Nothing noteworthy observed in the spleen. Kidneys large, of an egg-plant color outside, yielding on section very black and diffluent blood. Bladder much contracted, containing two drachms at most of fluid, turbid, dark, fœtid, and overloaded with albumen. The blood flowing from the divided parts was black and diffluent.

Case 2.—Domingos Gonçalves Pereira, Portuguese, forty-two years old, servant in a cow-stable, five months resident in Brazil, entered the Santa Izabel ward on the 11th May, 1873, at 3 P.M., with high fever and loss of appetite, having had a severe chill at noon. The physician on duty prescribed a purgative of sulphate of magnesia, and one gramme of quinine to be given after the first evacuations.

May 12th. Generally satisfactory; complete apyrexia, temperature 99°; pulse 78. Tongue covered with thick coat of yellowish fur; mouth bitter; anorexia; some thirst. Some sensitiveness in hepatic region, liver enlarged; spleen normal. The purgative produced four large stools. Urine normal, a little red. Ordered an emetic of ipecac, to be followed after it had acted by one gramme of quinine, likewise by four wet cups to right hypochondrium. At 2 P.M. the patient had a fresh chill, followed by fever; at 5 P.M. a temperature of 103.3°, and pulse 100; had taken the quinine at 1 P.M.

13th. Complete apyrexia; temperature 99°; pulse 78. Tongue less furred; liver still enlarged; frontal headache. Urine high-colored. Ordered two grammes of quinine in two doses—one to be given immediately (9 A.M.), the other at 11 A.M.; also a simple saline mixture.

At 4 P.M. another chill; at 5, temperature 104.5°, pulse 110, very intense frontal headache, pain in loins and legs. The interne prescribed a mixture containing acetate of ammonia and tincture of belladonna, a purgative enema, and sinapisms to lower extremities.

14th. Eyes injected and weeping; orange-yellow color of conjunctivæ; headache very marked; lumbar pains which force the patient to groan when he moves in bed, and which radiate to the lower limbs. Temperature 104.8°; pulse 120 and very full. Tongue furred at base and dry at tip. No nausea or vomiting; sensitiveness in gastro-hepatic region; liver enlarged; spleen normal. Urine slightly albuminous. Ordered one gramme of calomel in two doses; castor oil, forty-five grammes (two hours after the second dose of calomel); six wet cups to lumbar region; sinapisms to lower extremities.

At 5 P.M. temperature 105.5°, pulse 124; restlessness, epigastric distress, epistaxis; larger amount of albumen in urine. The patient had three evacuations, and the purgative was continuing to act. The interne prescribed a mixture containing four grammes of nitre and two grammes of tincture of digitalis.

15th. Generalized sub-jaundice; epigastric oppression, uneasiness; epistaxis lessened; temperature 101.5°, pulse 128. Tongue red at tip and dry in centre; black vomit from 6 A.M.; patient has vomited five times. Belly tympanitic; urine heavily loaded with albumen; intellect clear. Ordered:

℞ Murray's magnesia, 180 grammes.
Tincture chamomile, } āā 2 grammes.
Tincture calumbo, }
Tincture nux vomica, 12 minims.

A tablespoonful every half-hour.

Also iced lemonade, ice, etc.; blister to epigastrium; an enema of decoction of cinchona, with tincture of chamomile.

At 5 P.M. jaundice more marked, temperature 100.8°, pulse 130. The vomiting and epistaxis had ceased, but hiccough and bloody stools of black color appeared; great epigastric distress. The interne ordered the mixture renewed, adding to it two grammes of sulphuric ether.

16th. Jaundice well marked and general; temperature 101.8°, pulse 128; hiccough, stomatorrhagia, and enterorrhagia; tongue dry, having on its upper surface some small blood-clots; breath fœtid; teeth stained with blood; no vomiting; epigastric tympanites; belly depressed and soft; albuminuria; sub-delirium. Ordered a tablespoonful every two hours of a mixture of two grammes standard solution of perchloride of iron in 120 grammes of water; also every two hours, alternately with preceding, two tablespoonfuls of a mixture of 150 grammes strong decoction of cinchona, 18 minims sulphuric acid, and 30 grammes syrup of orange-peel; likewise strong decoction of jequitibá-peel,* to 500 grammes of which had been added four grammes of alum, to be employed for two enemas four hours apart.

At 5 P.M. the interne found the patient moribund. In spite of the treatment prescribed in the morning, and regularly carried out, the hæmorrhages continued, the adynamic condition became more marked, the hiccough more frequent, the extremities cooled, and the body was covered with clammy and fœtid perspiration. Death took place at 8 P.M.

Autopsy (fourteen hours after death): Saffron color of entire surface of corpse; lips and chin stained with blood. Great hyperæmia of arachnoid and cerebral hemispheres; yellow color of dura mater; venous meshes of latter membrane full of black and diffluent blood. Congestion of base of both lungs. Some effusion of yellowish serum in cavity of pericardium; heart completely empty, bleached, and fatty in right ventricle. Stomach contained hardly thirty grammes of dark and fœtid fluid, and its mucous membrane was much injected, presenting very prominent punctation, particularly in the vicinity of the pylorus. Great injection of mucous membrane of duodenum and jejunum; a notable amount of black fluid, evidently sanguinolent, occupied the entire cavity of the ileum and cœcum; the ileo-cœcal valve turgid, red, and softened; a little of the same sanguinolent fluid found in the transverse colon. Liver very large, congested and red at some points, yellowish and fatty at others; spleen of normal size, but little softened. Kidneys increased in size and fatty; bladder containing sixty grammes of very albuminous and fœtid urine.

Case 4.—Octave Tancrier, native of Bordeaux, aged twenty-five, cook, who arrived in a sailing vessel twenty days previous to attack, entered the Santa Izabel ward on May 15th, 1873.

The night before, after eating and drinking to excess, he was seized with vomiting and severe pain in the stomach. In the morning had high fever, headache, pains in loins and epigastrium. It was under these circumstances that he entered the hospital during the clinical visit.

Face very flushed, swollen; eyes injected and bright; very intense headache, violent lumbar pains, cramps in lower limbs. Temperature 105.2°, pulse 118. Tongue furred;

* *Couratari legalis* and *C. strellensis*, Martius, a native plant of Brazil, astringent and hæmostatic. —TRANSLATOR.

great thirst; bilious vomiting; great sensitiveness in epigastrium; liver and spleen of normal size; bowels constipated and doughy. Urine high-colored and without albumen. Ordered six wet cups to lumbar region; one gramme of calomel, to be followed by sixty grammes of castor oil; also a mixture containing twelve decigrammes of quinine and ten drops of Sydenham's laudanum, to be given in three doses at two hours' interval, after action of purgative medicine.

At 5 P.M. the patient was much better, the headache, lumbar pains, cramps and vomiting having ceased; temperature 100.8°, and pulse 88; the calomel and castor oil had produced eight large evacuations; the first dose of sulphate of quinine had already been administered; notwithstanding that two hours had not passed since this dose, the interne gave the second, ordering the third to be administered at 7.30 P.M.

16th. Sub-jaundice; general condition satisfactory; temperature 101.2°, pulse 90. Tongue still coated; the patient vomited the broth given him in the morning; still epigastric sensitiveness, but less; liver and spleen of normal size; albuminuria. Ordered a mixture containing one gramme of quinine and ten drops of laudanum, to be given in two doses; lime-juice lemonade as beverage.

The second dose of quinine was rejected by vomiting. At 5 P.M. the patient had more fever, temperature 102.2° and pulse 100; had dark-colored vomit at about 4 o'clock. Murray's fluid magnesia was prescribed with tincture of chamomile, and the application of a mustard plaster to epigastrium.

17th. Well marked and generalized jaundice; general condition good; temperature 101.5°, pulse 92. Tongue red at tip and edges; no vomiting; no fluid in stomach, as demonstrated by percussion of epigastrium; bowels constipated; albuminuria very marked. Ordered Murray's magnesia to be continued, along with tincture of chamomile, in tablespoonful doses; lemonade as beverage; mild purgative enema; two small enemata containing each six decigrammes of quinine, given three hours apart. At 5 P.M. temperature 100.8°, pulse 78; patient has not vomited; moderate epistaxis.

18th. Very intense jaundice; epistaxis; some petechial spots noted on abdominal wall, and an ecchymotic spot the size of a ten-cent piece on wall of thorax. Temperature 99.5°, pulse 68. Tongue less red at tip and edges; absence of vomiting and thirst. The purgative enema produced one bilious stool; the two enemata of quinine were well borne; the patient complained of buzzing in the ears and defective hearing; albuminuria very marked. Ordered meat broth with good wine; standard solution of perchloride of iron, 24 minims in 120 grammes of water, a tablespoonful every two hours; also:

Sulphuric acid, 18 minims.
Tincture of chamomile, 2 grammes.
Syrup of orange-peel, 30 grammes.
Strong decoction of cinchona, 200 grammes.

Two tablespoonfuls every two hours, alternated with iron mixture.

At 5 P.M. the patient was in good condition, the pulse, however, being very slow (52); temperature 99.6°; no epistaxis and no vomiting.

19th. Temperature 99°; pulse 52; jaundiced; one more ecchymotic spot, smaller than the first; the petechiæ not increased. No epistaxis or vomiting. Urine very bilious and albuminous. Ordered same mixture of perchloride of iron; wine of quinine, half a glass every two hours; meat broth, coffee.

20th, 21st, and 22d. The patient presented no change during these three days, excepting progressive increase of the number of pulsations of radial artery (60, 68, 75).

23d. General condition very satisfactory. Jaundice less marked. Temperature 99°; pulse 75. Tongue moist, large, and rose-colored; good appetite. The petechial and ecchymotic spots pale, with tendency to disappear. Urine very bilious, of yellow yolk-of-egg color, with only a very small amount of albumen. Able to sit up in bed and converse cheerfully. Continued wine of quinine only; soup, chicken broth, two boiled eggs, coffee.

On the 29th of May, fifteen days after entering the hospital, Octave Tancrier was discharged cured, retaining merely, as a trace of the grave disease which had attacked him, a jaundiced color of slight intensity, especially noticeable in the sclerotic conjunctivæ.

Case 4.—Archangelo Parisi, Italian, thirty-seven years of age, after three months' residence in Brazil, came from the city of Campinas (San Paulo) to Rio de Janeiro, and one month later entered the hospital of Nossa Senhora d'Ajuda—March 7th, 1873, at 7 A.M. Face swollen, very red, eyes brilliant; photophobia; very intense supra-orbital headache; rachialgic pains extending to arms and legs; delirium, restlessness. Axillary temperature 105.5°; pulse 120, full and very bounding. Tongue furred at centre and red at tip; great thirst; epigastrium sensitive to palpation and percussion; liver and spleen of normal size; constipation, which had not yielded to a pint of purgative lemonade of citrate of magnesia taken the evening before; urine scanty, very high-colored, slightly albuminous. Ordered

twelve leeches to each mastoid process; eight wet cups along spine; one gramme of calomel in single dose, to be followed by sixty grammes of castor oil; sinapisms to lower extremities. Also was recommended that one gramme of sulphate of quinine be given in the afternoon, if the temperature fell below 102.2°, otherwise a mixture containing six grammes of nitre and fifteen drops of tincture of belladonna.

8th. The evening temperature has fallen hardly half a degree after the action of the blood-letting and purgatives. The quinine was not given. At the time of my visit the patient was jaundiced, with constant delirium; temperature 103.3°, and pulse 126; tongue dry, retracted, and tremulous; uneasiness; epigastric distress; sensitiveness in region of stomach, humoral percussion-sound in this region; liver and spleen of normal size; belly tympanitic; urine bilious and heavily loaded with albumen. Ordered a mixture containing extract of belladonna, tincture of musk, and cherry-laurel water; a purgative enema of asafœtida and camphor; blisters to calves of legs; compresses soaked in ice-water on head.

At 6 P.M. the pulse became very small and frequent, temperature fell to 98.6°, carphologia appeared, and profuse epistaxis manifested itself. The interne replaced the mixture by another into which entered carbonate of ammonia, soft extract of cinchona, and tincture of canella, and introduced into the nasal fossæ small pledgets of charpie soaked in a mixture of equal parts of water and standard solution of perchloride of iron.

9th. A little before my visit the patient vomited a large amount of fluid similar to writing-ink. I found him comatose, with subsultus tendinum, cold extremities, axillary temperature 97.2°, pulse extremely rapid and thready, skin of the color of saffron. The urine was not examined. I ordered the same mixture continued, alternately with a few spoonfuls of port wine. At 2 P.M. the patient died. No autopsy was made.

Case 5.—Salvador Perez, Spaniard, forty years old, sailor, recently arrived at Rio de Janeiro, entered Santa Izabel ward May 1st, 1875, at 9 P.M. Had gone ashore during the afternoon of the 30th April, and returned on board at night. Confessed to having committed some excesses, both in eating green fruit and drinking spirits and beer. Awakened with pain in head, nausea, and pains in legs; had no chill or vomiting. After mid-day felt feverish; took a drink given him by the mate of the vessel to induce perspiration, but, far from improving, the fever on the contrary became higher; lumbar pains appeared and he could hardly move in bed. The physician on duty at the hospital prescribed a diaphoretic mixture, and sinapisms to lower extremities.

May 2d. Eyes injected, expression languid, orange color of palpebral conjunctivæ; very manifest injection of capillaries of thoracic wall, which may be due in part to sunburn. Supra-orbital headache; pains in loins and legs. Temperature 104.4°; pulse 100. Tongue very much coated; bitterness of mouth; great thirst; anorexia; sensation of great fullness in epigastrium; liver and spleen of normal size; bowels constipated; urine high-colored, without albumen. Ordered an emetic of ipecac, with five centigrammes of tartar-emetic; a purgative enema; one gramme of quinine if the temperature fell below 102.2°, otherwise a mixture containing six grammes of nitre and twelve grammes of acetate of ammonia.

After vomiting and purging profusely, the patient had a temperature of 100.8° at 5 P.M., the skin was moist, and the pains in loins and legs had disappeared. The interne ordered the quinine, which was well borne.

3d. General condition satisfactory; generalized sub-jaundice; temperature 100.8°; pulse 82; absence of headache and vomiting; examination of urine reveals presence of albumen. Ordered twelve decigrammes of sulphate of quinine in two doses; lemonade as beverage.

At 5 P.M. the interne found that the patient had had a small black vomit two hours before. The temperature was 99.3°, pulse 90; nothing indicated danger.

4th. At 7 A.M. a second black vomit, more copious than the first; jaundice more marked; large amount of albumen in the urine. Temperature 98.6°; pulse 80. Tongue clean. Ordered Murray's magnesia, with tincture of chamomile and tincture of calumbo; a small blister to epigastrium; lime juice lemonade; two small enemata containing each one gramme of quinine and five drops of laudanum.

5th. Black vomit not repeated; patient feels better; jaundice and albuminuria. Continued same treatment, except enemata of quinine; wine of quinine in spoonful doses, alternately with mixture; meat broth, coffee.

6th. Small hæmorrhage from lower gums; jaundice and albuminuria continued. Replaced the magnesia by a mixture composed of decoction of cinchona, sulphuric acid, and syrup of orange-peel; continued wine of quinine; prescribed a mouth-wash of infusion of nutgalls with eight grammes of alum in sixty grammes of rose-water.

7th, 8th, 9th, and 10th. The patient improved progressively as to general condition; the stomatorrhagia ceased entirely only on the 10th, and not until then did the amount of albumen in the urine sensibly diminish. He continued to use wine of quinine up to the 19th (half a glass every three hours), and an increasingly varied and restorative diet.

He was discharged on the 20th, retaining the yellow color well marked.

Case 6.—Francisco Sabugal, Portuguese, fourteen years old, stone-cutter's apprentice, arrived in Brazil eleven months previously, entered Santa Izabel ward May 24th, 1873. Felt unwell the morning of the 23d, but yet went to work; at 2 P.M. was taken in a carriage to his father's house, where he was given a drink containing spirits, and later on a purgative of castor oil.

24th. Eyes injected and bright, orange color of palpebral conjunctivæ; sub-jaundice color of skin in some parts, especially throat. Frontal headache; absence of pain in loins and legs. Temperature 106.2°; pulse 130 and small. Tongue furred and dry, with a rust-colored spot in centre; great thirst; vomiting from time to time; great sensitiveness in epigastrium; liver increased in size and painful on percussion; belly a little tympanitic; urine very scanty and free from albumen. Sub-delirium; the patient in perpetual motion in bed, lying now on one side, now on the other, or on his back; groans and utters deep sighs. Ordered lotions over whole body every three hours, made with a sponge soaked in a mixture of equal parts of water and alcohol—six students were designated to make these applications; lime-juice lemonade as a beverage; blisters to calves of legs; also:

Tincture of digitalis, } ää 2 grammes.
Tincture of aconite, }
Tincture of veratrum, 8 drops.
Syrup of acacia, 30 grammes.
Water, 150 grammes.

One tablespoonful every hour.

At 5 P.M. the patient exhibited well marked delirium and epistaxis; had had black vomit twice; temperature was 105.5°, pulse 132.

25th. Patient in a semi-comatose condition, and apparently beyond hope. Jaundice well pronounced; epistaxis, stomatorrhagia, repeated black vomit, enterorrhagia. Temperature 101.1°; pulse so small and frequent that its beats cannot be well counted; mutters constantly a series of unfinished and incomprehensible sentences; from time to time utters a cry, and is then seized by a violent general tremor; subsultus tendinum, cruci-dismus, and hiccough. Tongue stained with blood at some points, covered with small dry blood-clots at others; breath fœtid; suppression of urine; extreme sensitiveness of belly. Ordered mixture containing two grammes of gallic acid and diacodium syrup; port wine in spoonful doses, alternately with mixture; two small enemata, containing each one gramme of alum.

At 11.30 A.M., having scarcely taken two spoonfuls of the mixture and one enema, the patient died, having had shortly before a few convulsive movements in upper limbs, lower limbs, and face.

By reason of an order coming from the higher administration of the Mizericordia Hospital, the bodies of persons dying of yellow fever were not kept till the second day, but buried in the afternoon; therefore no autopsy was held.

XIII. In Rio de Janeiro, as in all the countries in the world where yellow fever has developed epidemically, this disease is very much graver in recently arrived foreigners than in the acclimated and citizens; among the people of the southern provinces, particularly of Rio Grande, San Paulo, and Minas Geraes, the gravity of an attack of the epidemic affection is the same as with foreigners.

The intensity of febrile heat does not necessarily indicate high gravity, save when it goes above 105.9°; but the prolonged duration of the maximum temperature reached by the fever in the first stage is almost always a bad prognostic sign. If the thermic maximum, having merely lasted three to six hours, be followed by the rapid fall of the thermometer, we should make a favorable prognosis; in this case the symptoms of the third stage do not ordinarily appear. If the maximum febrile heat is not modified by the use of antipyretics, the appearance of the third stage is certain; this stage usually assumes the hæmorrhagic form.

The more marked the apyrexia of the second stage, the more easily will the patient recover; the farther from the normal temperature is the fever, the graver will be the patient's situation. Epigastric distress and insomnia are the gravest of symptoms of the second stage.

Anuria is, of all the symptoms of yellow fever, that which I consider the most grave.

I am aware that Doctor Costa Alvarenga succeeded in curing a fourth of the cases where there was suppression of the urinary secretion; I am well aware that Louis does not assign to this symptom the same prognostic value that I do; but, having to guide my opinion by what I have observed in practice, with complete anuria dating from over twenty-four hours I am disheartened and lose hope of saving the patient, for I have not yet had a single case of recovery under these circumstances.

The kidneys have to eliminate in the urine the urea resulting from the nutritive interstitial disintegration of nitrogenized substances. Urea then is an excrementitious product; it represents the rôle of the ashes of organic combustion; if it is not eliminated, and is retained in large amount in the blood, it produces a poisoning which we term uræmia. Now, uræmic poisoning, whatever may be the cause preventing the elimination of urea, determines in the innervation a series of disturbances among which figure convulsions, delirium, and coma. When, then, there is anuria in yellow fever, the effects of uræmia are combined with the natural progress of the disease; the nervous system becomes the seat of the gravest functional lesions, with which life is incompatible.

XIV. Among the conditions favorable to the development of yellow fever, whether endemically or epidemically, three only can be destroyed: the existence of marshes, the great deposits of organic matter, and the accumulation of recently arrived foreigners during the summer. To dry up and fill in the marshes; to give free course to the rain-water, thus preventing it from becoming stagnant; to pay serious heed to the condition of the beaches, streets, and squares, promptly removing organic débris before it enters on decomposition; to establish a sewerage system that shall allow of complete disinfection of fæcal matters and prevent, by means of a large quantity of water, the blocking-up of the pipes conducting them; to frame a general plan of buildings for the poorer class to inhabit, where the more important and indispensable precepts of good hygiene shall be respected, where there shall be a previously arranged valuation, and where the government, through agents possessing its confidence, can exercise direct superintendence and effective watchfulness; to insist upon and give greater development to the method, latterly adopted, of dispersing recently arrived foreigners to various points of the interior of the province of Rio de Janeiro or to the southern provinces, of which the climate more approximates that of some European countries; such are, in brief, the resources of which the higher administration of our country should make use. Let them embrace the counsels more than once given them by the hard-working and distinguished president of the Central Board of Public Health, and yellow fever may perhaps leave us in peace, or at least be more infrequent in its epidemic manifestations.

Admitting in yellow fever three stages—first, of reaction, congestive or inflammatory, in which the disease is assimilated to an inflammatory fever; second, of transition, in which is remission of fever; third, hæmorrhagic or ataxo-adynamic—it is clear and evident that for each of these stages there should be a treatment; that the means indicated in one cannot be suitable to the others. The condition of the system varying according to the stage of the affection, the treatment should vary as well.

In the first stage there are high fever, congestions, and even inflammations; in the third, hæmorrhages, adynamia, ataxia; the systemic conditions then, in these two stages, are diametrically opposite. In the first there is no gravity in the symptoms, no danger immediately threatening life; in the third, the patient is constantly menaced with death. The second stage serves as a bridge for the passage of the disease; it is here that must be employed the means to prevent this passage; with these means the bridge is broken down, and the disorder does not reach the grave and threatening stage.

During the first stage of yellow fever, when the visceral congestions are very marked and threaten immediately the patient's existence, when, especially, there is notable hyperæmia of the meninges of the brain and of the brain itself, I do not hesitate to have recourse to blood-letting. If the disease has not yet gone beyond twenty-four hours, the patient young, robust and of sanguine temperament, the

pulse full, strong and bounding, I resort to the lancet, and take from the arm eight to twelve ounces of blood. If there is no clear and decisive reason for phlebotomy, I substitute leeches or wet cups for the lancet. The mastoid regions are the points selected for the leeches, when there is intra-cranial hyperæmia; the spine and lumbar region for the cups, when there is intra-spinal hyperæmia. There are physicians in Rio de Janeiro whose practical and scientific merit no one ventures to dispute, who retain bleeding, even general bleeding, as an invariable method of treatment in the first stage of yellow fever, administering at once after the blood-letting a full dose of sulphate of quinine.

I think there is nothing absolute in regard to this which should serve us as a rule; thus, as I censure those who wholly proscribe bleeding, so also I cannot praise those who use it in all cases. We must weigh with great nicety the indications and contra-indications, particularly when it is a question of phlebotomy; the physician should consider the gravity of the congestive and inflammatory phenomena, the temperament, age and constitution of the patient, the state of the pulse, and the date of the disease.

To favor diaphoresis and unload the intestinal canal, are indications that must be fulfilled at once in the first stage of yellow fever, endeavoring in this way to combat the febrile reaction, produce a remission, and prepare the system for the medication that is to prevent the appearance of the third stage. To promote free perspiration, I make use of mustard foot-baths, vapor-baths, and of a mixture containing acetate of ammonia and tincture of aconite in large doses, combined with cherry-laurel water and tincture of belladonna, which, besides being antipyretic remedies, concur also in lessening the intra-cranial hyperæmia and correcting the intensity of the headache.

After the patient has perspired freely, I resort to purgatives, always preferring calomel in the dose of one gramme, followed, two hours after, by sixty grammes of castor oil. My preference is based upon the elective action of calomel on the hepatic system, producing bilious evacuations, and upon the promptness of action of castor oil, inasmuch as the first-named drug, besides being untrustworthy as a purgative, is very tardy in its effect.

If the patient presents his tongue covered with a thick coat of white or yellow fur, indicating marked gastric disorder, whether or not nausea or even vomiting be present, I do not employ sudorifics, nor the cathartics I have just mentioned, but I prescribe an emetic of ipecac in infusion, and five centigrammes of antimony. By these means the patient vomits, purges and sweats largely, and the desired remission manifests itself promptly. In 1873 I made use of the emetic treatment in twenty-three cases, and in all it had good success. To my distinguished colleagues, Doctors Albino Rodrigues de Alvarenga, Joao Ribeiro de Almeida, and Theodoro Langgaard, this treatment, opportunely employed, also gave good results.

When the patient, despite the means to which I have referred, continues with fever, without manifest improvement, which is almost always of bad omen, my conduct varies according to the degree of intensity of the persisting febrile reaction. If it is moderate, I have not the least hesitation in employing the preventive medication proper to the second stage, although I have then little confidence in it. But simultaneously I have recourse to nitre in the dose of four grammes, in order to act on the circulatory system, lowering its erethism, and at the same time to increase the urinary secretion, that the products of organic interstitial disintegration, increased in amount by the prolonged fever, may be easily eliminated by the renal emunctories. If the febrile heat maintains itself at a high degree, above 102.2° for example, I use lotions of alcohol and water, or aromatic vinegar, applied two or three times a day with a sponge, and give at the same time digitalis (in the dose of two grammes of the tincture in 120 grammes of the vehicle) or veratrum (in a dose of six or eight drops of the alcoholic tincture). These two substances are energetic representatives of antithermic or antipyretic medication, and therefore are indicated whenever it is desired to stop or lessen a fever which inspires distrust on account of its intensity, its duration, or both.

The end I have in view with the medication of the first stage of yellow fever is to promote promptly the appearance of the sec-

ond stage, for in that are contained all my hopes. If I attain the desired end, I eagerly improve the opportunity and prescribe the preventive treatment to which I have more than once referred—an heroic treatment, accused so unjustly by several eminent and respected practitioners of Rio de Janeiro, but which, nevertheless, has lent me eminent assistance; this treatment consists of the salts of quinine.

XV. Both in the epidemic of 1850 and in the subsequent epidemics up to 1870, quinine was always employed in the second stage of yellow fever here, where all the physicians thought it indicated, and yielded indisputable benefit. The Baron de Petropolis regarded the indication of the precious remedy in this period of the disease as so evident that to the appellation of intermediary or transition stage he joined that of *quinine stage.* I was frequently a witness of the good results he obtained with this, his invariable procedure, at divers times when cases of yellow fever appeared in the wards of the university hospital. As soon as the febrile reaction ceased or diminished, the learned professor prescribed a good dose of quinine, which the patient took dissolved in sulphuric lemonade.

The baseless accusation which weighs today upon so rational a practice had its origin in 1869, after the publication of the last edition of the work of Dutrouleau. This distinguished French physician, led by legitimate induction, guided by sound principles of physiology, pathology and therapeutics, used quinine in the first cases of yellow fever he observed. But not then recognizing the nature and character of the disease, ignorant of the ætiological conditions under which it is developed, he had recourse to the drug in the third stage, when grave symptoms of hæmorrhagic or ataxo-adynamic order were present; he always administered it in enemata, for the patient had frequent vomit, and this vomit was often black; he administered it when ataxia and adynamia compromised the patient's life—and in this case, either absorption did not take place and the remedy was of no avail, or if it was absorbed it increased the nervous disorders. It is no wonder that the medicine should not have succeeded, that it should even have hastened death, the copious bleedings which the same practitioner invariably used at the beginning of the disease producing the same result.

From the thoughtful and attentive reading of the cases of Dutrouleau, results the conviction to the impartial and unprejudiced physician that the blood-letting and quinine fulfilled no real and well-settled indications, in spite of the recognized skill of the practitioner who made use of these remedies. To bleed in all cases of yellow fever is a proceeding as censurable as to administer large doses of quinine, even by enema, after the appearance of symptoms of the third stage.

Doctor Dutrouleau, disheartened by the disastrous results he had obtained, forgetting that they might be explained by the untimeliness of his treatment, severely condemned both the remedies he had used, especially the second, and in the second edition of his work made a protestation of repentance, basing it upon statistics which prove nothing against quinine. Some Brazilian physicians, impressed, by the numerical significance of these statistics, and influenced by the author's authority, rapidly changed their opinion, and began to think harmful in the treatment of yellow fever the same remedy which up to that time they had used with indisputable success.

They accuse quinine of exciting black vomit and of favoring the manifestation of typhoid symptoms. As already stated, black vomit is the result of hæmorrhage of the stomach, the blood being mingled with mucus, bile, and other fluids that may exist in the cavity of the organ. If there exists in the blood-crasis the condition which prepares hæmorrhages, they will inevitably occur, by this, that or the other point of the system; I cannot conceive any reason why a quinine salt should determine extravasation of blood to the gastric mucous membrane. I should like explained to me the mechanism by means of which, the cause being given, the effect manifests itself. In the second stage of yellow fever there is usually a tendency to vomiting; in some cases the susceptibility of the stomach requires the use of anti-emetics in this stage. Under these conditions, even when the patient has not yet vomited, the swallowing of a bitter fluid or one disagree-

able to the palate is enough to provoke contractions of the organ, expulsion of its contents then occurring.

Now if this result is sometimes produced by a few swallows of broth, a few spoonfuls of some mixture, no wonder it may be brought about by quinine, the taste of which is often intolerable to the stomach of persons suffering from malarial fevers or other diseases which require it.

If in the gastric cavity there is a certain amount of blood, composing the black matter, it will make part of the vomited substances, whatever be the drug that produces the vomiting. And moreover, once the exudation of blood is in the stomach, its expulsion is of advantage; not only is the viscus thus freed of the load that distended it, causing the patient great distress, but also the hæmostatic and anti-emetic remedies, employed to prevent fresh exudation and to calm the irritability of the stomach, act more promptly and directly upon that organ when it is empty.

The appearance of the third stage is almost always announced by a black vomit; before this symptom manifests itself, the patient is considered as being in the second stage of the disease; he takes, consequently, quinine. Nothing is easier to observe than the coincidence of black vomit appearing after the administration of quinine, without our being authorized on that account to admit the relation of cause to effect between these two facts. Let us now analyze the second accusation.

There is no doubt that quinine frequently produces a certain number of nervous disorders, some of which may assume a grave aspect and inspire suspicion. But this is only observed after the continued use of large doses of the drug, and in persons of nervous temperament and very excitable, in whom tolerance of neurasthenic medication is very limited. Even in this case the effects of the quinine upon the innervation may be effectually lessened by combining opium with it, and giving simultaneously to the patient a little wine or a few spoonfuls of *Agua de Inglaterra.** It is not only in yellow fever that the precious remedy determines the manifestation of nervous phenomena; in the malarial fevers, especially the pernicious, the same often occurs; yet, in a case of ataxic, delirious, convulsive or comatose pernicious fever, no one assuredly will forbear to give large doses of quinine, overborne by the fear of aggravating the symptoms presented by the patient.

The benefits of the salts of quinine in the treatment of yellow fever are demonstrated by arguments drawn from theory and from clinical observation.

Yellow fever is the result of an infectious miasm which poisons the blood, and consecutively the entire system; this miasm comes from the decomposition of organic matter, is essentially phytozæmic. Now, since quinine became known to the medical world, since its efficacy in cases of malarial poisoning became an axiom in therapeutics, it has been considered the antidote *par excellence* to all diseases depending upon a miasmatic poison. In diphtheritic poisoning, and in that which produces cholera, it has been employed with notable benefit. Before it was known that typhoid fever, in spite of being an infection of miasmatic origin, is characterized anatomically by intestinal lesions which run a regular, uniform and cyclical course, attended by a febrile reaction having determined periods and evolutions, sulphate of quinine was employed against it also, and still at the present day there are eminent practitioners among us who have not abandoned it. In uræmia, a poisoning of the blood produced by an organic substance, urea, the same drug is vaunted as the only one capable of neutralizing the effects of the poison. I see no reason why yellow fever should be an exception to the general rule, especially as a malarial element enters into the miasms producing it.

In a large number of cases, after a fever of remittent type lasting twenty-four, thirty-six, or forty-eight hours, the febrile heat completely ceases or greatly diminishes, the pulse becomes less full and frequent, the patient feels perceptibly improved, and a copious perspiration often appears, bathing the entire cutaneous surface. In this course followed by the disorder, who can fail to recognize a malarial remittent fever, arrived at the epoch of its evolution which demands large doses of

* A proprietary remedy much used in Brazil, and consisting of cinchona bark with the must of grapes, the mixture being fermented.

quinine? Who can with an easy conscience let pass this propitious occasion without administering to the patient the powerful specific which should nullify the action of the infectious miasm?

Yellow fever is a disease of miasmatic nature; it consists, in its basis, of a poisoning of the blood, which later on determines grave disorders in almost all the organs, and particularly a profound alteration in the blood-crasis. Now, since we can act upon a poison by means of an antidote which neutralizes it, preventing the manifestation of its pernicious effects, we ought to do so. If the poison can be reached before it has entered the system, so much the better—the triumph of the neutralizing medication is infallible. But if the physician comes late, if the maleficent body has already been absorbed, he should not therefore be disheartened and lose hope; he may still employ some means which, in the strict language of toxicology, lack the name of antidote, but which are destined to neutralize the poison, not in the stomach or intestines, but in the blood, where it has been carried by absorption. We cannot neutralize the poison of yellow fever before it has penetrated the system, except when, by means of suitable disinfection, we sterilize a centre of infection.

Miasmatic poisoning having occurred, we should endeavor to neutralize it as promptly as possible, before it has produced its fatal results. The neutralizing agent should not, cannot, be any other than quinine. To give it when there is high fever, gastro-intestinal disturbance, visceral congestions, and erethism of the circulatory system throughout the body, is useless, of no avail, because it is not absorbed; all the conditions of the patient are opposed to absorption. Let us then remove these unfavorable conditions, and as soon as this has been accomplished lose no time, but administer the preventive, neutralizing or *antidotal* medicine—as I should prefer to term it. The means for removing the obstacles which hinder the absorption of this medicine are those assigned to the first stage of the disease, of which I treated in a preceding paragraph. The illustrious Baron de Lavradio says:

Let us not fail to recognize that a very great point of analogy exists between the miasm producing yellow fever, and that of the intermittents, both being the result of effluvia due to decomposition of organic matter; but on the other hand, let us not ignore the fact that another very distinct point separates them.

Now, either my respected colleague must admit that the nature of yellow fever has changed from 1850 to the present, which is not easily demonstrated; or he must admit with me that a miasmatic disease, the miasm producing which offers great analogy to malarious effluvia, cannot dispense with the use of quinine, excepting when contra-indications are present. I beg permission, then, of the Baron de Lavradio to dissent from his opinion as regards the unjust and unfounded manner in which he absolutely condemns the salts of quinine in the treatment of yellow fever.

In 1873 entered my clinical service in the hospital of Nossa Senhora d'Ajuda 139 yellow-fever patients, of whom six were moribund and were in the ward from one to six hours. Of the 133 remaining, twenty-three died and 110 recovered. Of the deaths, only eight took quinine, for the other fifteen entered under conditions contra-indicating the use of this drug. Of the recoveries, only eighteen did not take quinine, on account of their entering when already in the third stage; in ninety-two it was employed, during a space of time never less than four days, the prescription in many cases being prolonged beyond a week. It results, then, from these statistics, scrupulously based on the strictest observation, that out of one hundred patients entering in the first stage, and in whom the disease reached the second, quinine, employed in this second stage, failed to prevent the appearance of the third in only eight; in ninety-two it completely fulfilled the end to which it was administered. In those cases where some hæmorrhagic or ataxo-adynamic symptoms manifested themselves despite the preventive medication, these symptoms, besides being few in number, were mild.

If the febrile reaction of the first stage ceases entirely, the appearance of a copious and general perspiration coinciding with the apyrexia, I give two doses of quinine, of six decigrammes each, at three hours' interval,

taking care to add to each dose five drops of Sydenham's laudanum in order to prevent vomiting. If there is not complete apyrexia, if the thermometer indicates a temperature above 99.5°, I prefer to give a mixture containing twelve decigrammes of quinine in teaspoonful doses hourly, for in this case the stomach bears the remedy better in divided doses. When there is an evident tendency to vomiting, I resort to the pilular form:

Quinine, 2 grammes.
Soft extract of cinchona, 1 gramme.
Morphine, 5 centigrammes.
For twelve pills; take one every two hours.

In cases where the sudden fall of febrile heat goes beyond the normal figure, with manifest lowering of temperature in the extremities, I combine valerianate with the muriate or sulphate.

I always keep up the same dose of quinine, never less than one gramme, if the patient be adult, during two consecutive days; afterwards I go on gradually diminishing the doses, as if it were a case of malarial intermittent or remittent fever.

As long as the patient is taking the quinine, I order as beverage lime-juice lemonade strongly acidulated; by this apparently simple means I have in view to correct the tendency of the fibrin of the blood to become diffluent in yellow fever, thus predisposing the system to passive hæmorrhages. In scurvy, the grave malarial fevers, typhoid fever, and other diseases arising from dyscrasia, where there is the same tendency, citric acid has lent valuable aid.

After the preventive treatment is entirely stopped, I resort to tonics, to give the patient strength and procure a rapid and full convalescence; I almost always prefer the *Agua Ingleza* or wine of quinine. With a restorative and easily digested diet I perfect the cure.

If, in spite of quinine, the third stage of the disease appears, the therapeutic means I then make use of are wholly different, and vary according to the nature of the symptoms.

XVI. In the third stage of yellow fever the medication of most avail is that directed to the predominating symptoms. To combat the vomiting which appears and becomes frequent, we must resort to anti-emetics and effervescent mixtures, revulsives to the epigastrium, and acid, well iced drinks. When the vomited matters consist of mucus, bile, and ingested fluids, and nothing characteristic is yet present, I employ with benefit the following:

℞ Murray's fluid magnesia, 250 grammes.
Morphine, 5 centigrammes.
Tincture of chamomile, 2 grammes.
Tincture of nux vomica, 15 drops.
One tablespoonful every hour.

At the same time I order a sinapism applied to the epigastrium. In many cases the vomiting ceases entirely under this treatment, but in others it continues, which is an almost certain indication that the black matter will appear in a short time in the vomit. In that case I have recourse to iced drinks, to ice in small fragments, to the anti-emetic mixture of Rivière, or to:

℞ MacMunn's elixir of opium, 12 drops.
Tincture of calumbo, } ää 2 grammes.
Sulphuric ether, }
Syrup of orange-peel, 30 grammes.
Mint-water, 180 grammes.
One tablespoonful every hour.

Oxalate of cerium, in the dose of thirty centigrammes in 180 grammes of water; tincture of iodine in the dose of six drops, combined with tincture of belladonna in dose of one gramme, in 120 grammes of water; lime-juice lemonade strongly acidulated, given in tablespoonful doses,—are means that I have found successful in some obstinate cases where the patients continued to vomit frequently in spite of the treatment to which I have just referred.

When the black vomit consists of a blackish pulverulent substance suspended in a greenish and transparent fluid, I persist with anti-emetics; but if there comes from the stomach a black homogeneous liquid resembling writing-ink, or blood with all its manifest characters, I select my remedies from the anti-hæmorrhagics or hæmostatics. The first of which I make use is ergotin, in sulphuric lemonade as a vehicle. If that drug does not give beneficial results, I resort to gallic acid in the dose of two grammes in a mixture.

When there are various hæmorrhages, and the patient's life is in danger from loss of

blood, I employ with great confidence the standard solution of perchloride of iron, in the dose of two or three grammes in 180 grammes of water, alternating this mixture with another composed of strong decoction of cinchona 200 grammes, sulphuric acid 18 drops, and syrup of orange-peel 30 grammes.

Ice, administered internally, and applied in ox-bladders or rubber bags over the epigastrium for several hours together, was the only means with which I could check a profuse gastrorrhagia in a young Spaniard. A blister to the epigastrium has been constantly and successfully employed by me in cases of black vomit.

Pinches of a mixture of tannin and resin, small tampons of lint soaked in solution of perchloride of iron and introduced into the nasal fossæ, are means I have used to cause cessation of epistaxis. Mouth-washes of tannin, alum, borax, and perchloride of iron, to combat stomatorrhagia. Enemata of decoction of jequitibá* peel, with alum, to check the progress of a profuse enterorrhagia. There are stubborn cases where the physician needs constantly to vary drugs and formulas, running through the scale of astringents and hæmostatics without succeeding in stanching or lessening the hæmorrhages which occur frequently and copiously by the natural passages and attend the patient to the moment of death.

When the third stage of yellow fever assumes clearly the ataxo-adynamic form, it is in the class of diffusible stimulants and antispasmodics that we must seek therapeutic aid. Musk, belladonna, and cherry-laurel water, in mixture, when there is delirium, together with enemata of valerian, camphor and asafœtida. Ether, the ammoniacal preparations, especially carbonate of ammonia, as also musk and valerian, are the medicines I prefer in cases where coma appears. The bromide of sodium or potassium is a remedy *par excellence* for convulsive symptoms; the opiates, particularly the salts of morphia, and in extreme cases hydrate of chloral, for insomnia and restlessness. Hiccough, which in some cases becomes pertinacious and torments the patient, is a symptom of ataxia demanding direct and special treatment. I am accustomed to employ in this case the following, with much benefit:

℞ Cherry-laurel water, Paregoric, } āā 8 grammes.
Hoffmann's anodyne, 4 grammes.
Syrup of orange-peel, 30 grammes.
Canella-water, 150 grammes.
One tablespoonful every hour.

In some patients the hiccough becomes so obstinate that it yields only to bromide of sodium or potassium in doses of two or three grammes.

Alcoholic mixtures, good port wine, *Agua de Inglaterra*, and cinchona are the means adapted to the adynamic condition, tending as they do to stimulate the nervous centres and elevate the radical forces of the system.

Blisters to the lower extremities, fly blisters, and frictions all along the spine with a mixture of equal parts of aromatic vinegar, tincture of valerian and ethereal tincture of phosphorus, are auxiliary resources which have been of service to me in the ataxo-adynamic form of the third stage.

To combat anuria, diuretic medication should be employed, if there is still no adynamia; but if the patient is adynamic and has frequent vomiting, this treatment is contra-indicated; the physician should then have recourse to stimulant frictions to the renal parts, and in extreme cases to cold embrocations. Violently agitating the entire nervous system, rousing it momentarily from the torpor in which it lies, this beneficent and salutary action may extend to the renal innervation, and the glands animated thereby may resume their suspended functions.

The Baron de Petropolis, having for the first time employed cold embrocations in the hospital wards in 1836, when many patients came here affected with typhus, which then prevailed as an epidemic in this city, and having obtained excellent results therewith, resorted to them in 1850, at the Livramento Hospital, in many cases of yellow fever of ataxic form. The number of patients in whom cold embrocations were used was 190; of these thirty-six recovered. My respected master asserts, in the valuable work he wrote, that in the gravest cases cured in the third stage the cure was due to the cold embrocations; he says that he was sorry not to have been able to employ them in all the

* *Couratari legalis*, Martius.

cases, inasmuch as the excessive reaction in the first stage, the sweats which supervened in and even continued throughout the second, the rapid depression of strength, and the algid or syncopal condition, contra-indicated them in other instances.

After the use of cold embrocations, the Baron de Petropolis observed that at times the pulse lessened in frequency, the skin became moist or was covered with profuse perspiration, the other symptoms lessened in intensity, and the patients felt perceptibly improved. At other times the first embrocation effected no apparent change in the symptoms; it was necessary to make use of a second or third, at an interval of some hours.

I have never had occasion to employ cold embrocations in yellow fever; but I once employed them very successfully in an extremely severe case of typhoid, the patient being a Portuguese lad of fourteen, boy in a tavern of the Rua do Senhor dos Passos. It is a last resource, which can only be used in a hospital, or with a patient who allows his physician entire freedom of action.

WHAT HAS BACTERIOLOGY DONE TO AID IN THE DIAGNOSIS OF INTERNAL DISEASES?*

BY PROFESSOR O. ROSENBACH.†

I do not ignore the fact that bacteriology has done much to shed light upon the biology of the tiniest forms of life, but I hold that as a basis for clinical diagnosis and medical treatment it has been greatly overestimated. In the domain of diagnosis it has led to diagnosis *in absentia*, inasmuch as a technical bacteriologist, remote from the sick-bed, is now expected to determine the disease by an examination of the excreta, thus affording a basis for prognosis and therapy.

Bacteriology reaches false results, by placing the human subject in the same category with the experimental animal and the inanimate culture soil; in other words, the individual peculiarities of the organism are eliminated by using maximum quantities of poison and by removing all the natural safety devices (injection of large quantities of pure cultures into the blood). Thus, instead of the varying images and the shifting course of infectious diseases, we obtain the uniform image of an infectious disease—the drowning of the organism with a flood of microbes and their products. Finally we have reached a state of things wherein all animals experimented on are not only infected in the same manner, but die alike, or are cured by the same dose of a remedy (relatively to the body-weight). Therefore I hold that bacteriology makes an unjustifiable use of deductions from analogy, and indulges in comparisons of things which are not comparable. By cutting the Gordian knot of infection, bacteriology has by no means succeeded in solving the enigma. We know neither the path of infection nor its vehicle, nor the cause of epidemic irruption, any better now than before; all we have is a series of unproved dogmas, such, for example, as the dissemination of the cholera along the waterways.

Despite the wretched fiasco of the antibacterial (microbicide) therapy and of the Koch method, the modern *curative-serum-therapy* is beginning its march through columns of statistics; yet it is built up on a misconception of the essence of disease and its cure, since it confuses a possible preventive therapy (inoculation) with the possibility of exerting influence on the morbid state—on the modified reactionary condition of the tissues, produced by protracted incubation. Here, where a whole change of processes has already been let loose, to persist independently of the first invading process, the conditions are very different from those prevailing in cases wherein no foreign poison has yet been introduced and the material for inoculation encounters a soil which is relatively virgin and reacts normally.—Remarkable, too, is the fact that a homœopathic dose is claimed to effect a sure revolution, whereas the infected body is not capable of obtaining a "curative potency" from its own serum under the influence of the infecting vehicle which contains a maximum quantity of the poison. For this reason, their brilliant results—based, moreover, on a small number of cases—are simply apparent; in my judg-

*Address delivered September 28th, 1894, before the Section of Internal Medicine of the Sixty-sixth Congress of German Naturalists and Physicians, at Vienna.

†University of Breslau.

ment they are the result of an arbitrary reading of the statistics, to say nothing of the fact that local and general fluctuations of mortality may deceive even the skeptical investigator.

The new treatment for diphtheria—a sister of homœopathy—is said to be most successful in cases which are received for treatment in the first stages or at a time when the clinical differentiation of benignant inflammation of the throat and diphtheria is by no means certain. The mere presence of diphtheria bacilli is not identical with the image of clinical diphtheria, or even a sign of severe process, for a developed tissue-disturbance is the first sure sign that the power of a poison has been exerted on the tissue; and these tissue-disturbances are the first index to the severity of the disease. If every case presenting diphtheria bacilli is to be called diphtheria—if the yet inactive (hypothetical) poison is to be considered active, then, of course, the new treatment has an advantage over the old; since it takes to itself all the most favorable chances of cure in the dubious cases which most commonly prove to be simple anginas. Every other treatment will show favorable results if tried on the first day—in other words, in cases wherein, according to our present knowledge, diagnosis of diphtheria or simple inflammation of the throat is impossible.

In my judgment, the various forms of inflammation of the throat, with respect to the degree of danger, are less distinguished by the species of poison—the species of the so-called "disease provoker"—than by the reactionary extent and form of the invaded tissue. In the diphtheria of scarlet fever, only streptococci or the cocci of suppuration are present; yet its course is no more favorable than that of specific diphtheria. Simple inflammation of the throat, in which the same microbes are found, accordingly receives its benignant character only from the resistant power of the tissue. Strange as it may seem, however, it is now the fashion to term "diphtheria," cases in which bacilli are present, though there be no disturbance of tissue, thus confusing the possible cause of the disease with the disease itself. With equal reason we might say that plums are decayed because they show mould, or talk of pneumonia when the pneumonicoccus is found in the mouth; whereas the plum becomes a soil for the mould-germ only when its outer skin has been broken, and the pulmonary tissue for the coccus only when its power of resistance has been reduced—for example, on "catching cold."

Thus has arisen the conflict between clinical observation and bacteriological research. The physician diagnoses a simple inflammation of the throat, where the bacteriologist sees diphtheria with all its horrors. Thus it has come to pass that the bacteriologist knows only "tuberculosis," whereas the clinician must distinguish between phthisis, tuberculosis, broncho-pneumonia, and catarrh—so many different species of the reactionary form.

Thus, it may even be possible for the physician to consider a man dying, while the bacteriologist at a distance sends word in a few days that the disease is benignant—a case of cholera nostras. *Per contra*, it may happen that a man who does not feel at all sick is deprived of all human rights because he is found to be infested with comma bacilli!

All these errors are due to a varying interpretation of "diagnosis;" this profound divorce of practical from theoretical judgment has come to prevail, only because we have neglected individual diagnosis — the sole means of judging a case.

In the future we must not regard the individual as a "negligible quantity." We must strive not only to discover the poisons which invade the organism, but to establish the latter's disposition—that is, we must reinforce and utilize the latent powers of the organism. Poison* is not that which is capable of producing modifications in the organism, but rather that which has already produced such modifications.

As a basis for establishing disposition, we can only avail ourselves of the visible signs of modified function, the so-called symptoms; and the latter are but an inaccurate reflection of the internal changes of the economy.

Difficult as it may be, more study must be devoted to the discovery of these relations, to determining the energy consumed—

*Reiz, literally *irritation*.

not alone the exchange of energy—in each piece of labor performed. For example, from the mere results of past researches into metamorphosis the proportion of energy is as little to be determined, as is the prosperity of an enterprise or the social condition of the laborers from the size of the dividends.

Even when the reactionary form (the symptom) is known, in order to determine the internal processes on which the symptom is based we are obliged to solve an equation with two unknown factors, since commonly we are unfamiliar with either the disposition of the organism or the magnitude of the poison. If the magnitude of the reaction were proportional to the magnitude of the disturbance, the morbid tableau would always be the same under like disturbance; but practical experience teaches that this is not true. The same intensity of intoxication or trauma produces different complexes of symptoms in different persons. Koch's process, in which the disturbance or poison was measurable by the dose of tuberculin injected, and the degree of temperature indicated the magnitude of the reaction, has best enabled us to demonstrate scientifically this influence of disposition.

We may accordingly regard microbes as the causes of morbid symptoms only then when the disposition of the organism to react to this poison is at its maximum, or when the poison (disturbance) attains an unusually high degree, as in injecting pure cultures or in introducing large quantities into the stomach. When disposition is minimal, we have immunity; when medium, we obtain the differing tableaux of disease, according as the single components of immunity—the thermic, chemical, and other processes—are of greater or less intensity, or as the excitability is depressed by adapting and disarticulating inhibitory processes. To the first category of diseases wherein the bacterial species is of diagnostic value, belong perhaps malaria, remittent fever, inflammation of the spleen, and severe pyæmia—diseases where the microbes are constantly present and readily discoverable in the blood or in the tissues. To the second category belongs *Typhus abdominalis*, wherein a far-reaching disposition of the tissue produces the primary modifications; the latter promote the growth of bacteria otherwise not pathogenic (*Bacterium coli*), and they in turn may be the cause of an independent, *secondary* disturbance of tissue. The progress of the destruction of the lung in phthisis (I purposely do not say tuberculosis) always presupposes a predisposition which receives its most distinct expression in a definite form of scrofulous disease or in a special form of thorax. Given these conditions, cocci of suppuration, tubercular bacilli, or the various forms of microbes may develop while presenting a tableau of symbiosis.

THE SONG OF THE MERRY MICROBE.

I am a cultured bacillus, living in veal bouillon—
Soaking in this nutritious dish, no wonder I grow strong;
Yet long before obesity my destiny shall prove,
I multiply like blazes; and I and my children move
In the most exclusive circles; for we conquer as we go,
Until everything in sight is in our set—ah! doncher-know?
We're great on colonization—it's a universal fad,
And all the bacilli that do not join us wish they had:
For we're perfectly irresistible as we march against the foe,
Chasing him round the soup tureen—that is the way we grow!

We have no use for sunlight, and object to too much ozone;
But mercury is the devil, and the thought of him makes us groan.
Born in the whirl of fashion, we nevertheless grow lean
Doing the work we're paid for—manufacturing toxine;
And when we are dead and buried, and even our names forgot,
Our works live on and accomplish things which we in the flesh could not:
I will not try to tell you all; but up from common itch
To renal tuberculosis and mediastinal stitch,
We have a vote in deciding the shape of the illness dire
That mortal man must suffer ere he joins the angel choir.

We're clannish as the Scotchman, and there's no folks like our own,
Yet one of our fair relations we hate as we do ozone:
She is the Aunty Toxine you have heard so much about,
Who was safe in the cellar and harmless until Behring brought her out.
Now, if you will believe me, she threatens to make us hum—
She and the phagocytes that dwell under the blood-serum!

W. A. T.

Detroit, Nov. 19, 1894.

Correspondence.

THE KEELEY HUMBUG.

Editor MEDICAL AGE:

The Keeley cure has attracted the attention of the medical profession. A few plain facts may serve as a basis of the true conception of this senseless fad. While the cure has benefited some, let us see the other side of the picture.

Patients while undergoing the cure present all the pathological evil effects of atropia and strychnia. The mind is peculiarly affected; they write letters that are on a par with insane individuals, and are as apt to post their letters at the hardware store as at the post-office.

These are the symptoms of the acute condition produced by the Keeley cure:

They wander around like children, and have no aspiration than merely an existence; some commit suicide before they leave, others die through shock; large numbers have been shipped from here in a box, always at night. The mental disturbance is characterized by the deepest melancholy. Some are able to stagger around and pull themselves through this condition, while others leave here with this chronic trouble, and wander aimlessly and are fit for no vocation in life whatever.

Numbers are visiting this Mecca for their second and third time, presenting all those symptoms enumerated above.

JAMES S. CONWAY, M.D.,
Assistant Surgeon Chicago and Alton R'y.

Dwight, Illinois,
November 6th, 1894.

EUCALYPTUS IN CORYZA.

Editor MEDICAL AGE:

DEAR SIR: Under the above heading you published an excerpt of a foreign article in your issue of October 25th, which has interested me considerably. I am myself prescribing eucalyptus for the same conditions and find that it will relieve the coryza wonderfully. I have suffered from periodic rhinitis these last two seasons—hay fever in other words—and accidentally made the discovery of the effects of eucalyptus when my second attack had well advanced. I got some oil of eucalyptus to rub on my herbarium shelves to keep off ants which were threatening my specimens, and in applying it almost immediately found that its odor had so completely removed or reduced the congested condition of the nasal passages that I could breathe freely through them. This called my attention to the matter, for I had not been able to breathe except *per os* for a few days before unless I used cocaine, and I at length decided to use that drug no more. From the moment I ascertained that eucalyptus could help the rhinitis I had my attack practically under control. I placed a few drops of the oil on a handkerchief for use at night or when opportunity offered during the day. For such time as I could not use this I found that a strong peppermint lozenge in the mouth had quite a pronounced effect in relieving the congestion, although scarcely equal to the eucalyptus inhaled by the nostrils. Altogether I was very much gratified at the short duration of the attack when compared with that of the year before. The same success in reducing all symptoms was the result in four other cases for which I prescribed the eucalyptus.

My own boy of four caught cold a few days ago, and when I first saw him he was in bed asleep making strenuous and almost painful efforts to breathe through his nose, until the lungs' demand for air got so imperative that breathing through the mouth was resorted to; after a few inspirations in this way, breathing through the nose would be resumed again, only to have the same thing repeated. I thought this would be a good chance to test the eucalyptus, and, putting a couple of drops or so of the oil on a handkerchief, I placed the latter in front of his nostrils without touching the face. An impatient gesture immediately announced the fact that its presence was being felt, and in about another minute he was breathing comparatively easily, a slight difference only being noticeable from the normal. I scattered a few drops on the pillow, and he had no further trouble that night.

I have not tried the remedy in a sufficient number of cases to justify the assertion that eucalyptus is a specific, but it is certainly a good remedy to try.

GEO. SUTTIE, M.D.

334 Trumbull Ave.,
Detroit, Mich.

CHICAGO GYNÆCOLOGICAL SOCIETY.

At the sixteenth annual meeting the following officers were elected: President, Franklin H. Martin; First Vice-President, A. J. Foster; Second Vice-President, J. C. Hoag; Secretary, H. P. Newman; Editor, T. J. Watkins. The retiring President, Dr. Fernand Henrotin, delivered an interesting address, after which the Society adjourned to the annual banquet.

Society Meetings.

WINDSOR PHYSICIANS AND SURGEONS' ASSOCIATION.

The regular meeting was held Tuesday, October 9th, 1894, at the residence of Doctor Reaume; the President, Doctor Samson, in the chair.

Doctor Prouse presented a paper on "Iritis."

Doctor Cruikshank thought the subject well covered, though the paper was short. One should be careful in using atropine to drop it directly over the pupil, keeping the lids open, and using some cotton to absorb remaining solution. When glaucoma is present, paracentesis cannot be done too soon. Sometimes nodes may be treated by the internal administration of salicylic acid or salicylate of soda.

Doctor Bell had a case of traumatic iritis. First symptom was difficult vision and pain, with discoloration and contracted pupil. Used hot-water applications with solution of atropine, but found dry atropine crystals gave better results. Used hypodermatic injections of pilocarpine and calomel, followed later by magnesium sulphate.

Doctor Reaume: First thing, strong purgative of calomel with salines. Always seeks the cause and treats accordingly, but sometimes the cause cannot be ascertained. Confines patient to house, and insists on smoked glasses being worn. Always finds atropine solution effective, in strength of two grains to the ounce; sometimes combines cocaine. Has never used leeches.

Doctor Gonig: Extract belladonna was used years ago, painted around the pupil.

Doctor Prouse thanked members for kind remarks.

Doctor Samson urged the necessity of making sure of your diagnosis, and not make the fatal mistake of treating glaucoma for "iritis."

Doctor Hoare promised to prepare a paper for the next meeting.

Adjourned, to meet at Doctor Hoare's office in Walkerville, Tuesday, November 13th, 1894.

D. E. BROOKE, *Secretary.*

WAYNE COUNTY MEDICAL SOCIETY.

At the annual meeting held in Detroit last month the following were elected: President, E. B. Smith; Vice-President, Samuel Bell; Secretary, W. R. Henderson; Treasurer, C. Henri Leonard; Board of Directors—W. J. Brand, Geo. Dakin, R. R. Lansing, L. E. Maire, Kenneth Gunsolus.

The Medical Age.

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Editorial.

THE ANTITOXINE TREATMENT OF DIPHTHERIA.

In the last issue of THE MEDICAL AGE appeared an editorial under the caption "A Professional Disgrace," in which we had occasion to animadvert upon the antitoxine treatment of diphtheria. This has drawn out a number of letters to the editor, many protesting against the stand taken by this journal, and likewise pointing out the mass of evidence that has accumulated in favor of the measure.

We do not profess to be "hidebound," and if there is a modicum of truth in the theory no one would be more pleased than THE MEDICAL AGE, for the ravages of diphtheria are only too frequently brought home to the families of physicians.

The evidence thus far adduced, however, has not been of such a character as to cause us to materially change our views. We will admit we are open to conviction, and that possibly we might have been hasty in the former criticism—which was intended for an earlier number of THE MEDICAL AGE than that in which it appeared,—which after all is but natural, considering the many *fiascos* that have already placed the medical profession in disrepute. We can only express our conviction of the necessity now for thorough experimentation and study; the ball has been set vigorously rolling, and its movement must necessarily be continued and aided until the goal is reached, whether the ultimate verdict be affirmative or negative. Serum therapy has proceeded so far it manifestly "will not down;" it forces attention, and its value must be determined at all hazards; its properties, advantages and disadvantages must be established with something approaching scientific precision.

In our Original columns will be found a

paper by Professor O. Rosenbach, of the University of Breslau, one of the ablest practitioners of the Empire of Germany, whose words are deserving of great weight. *Per contra*, in the Progress columns will be found a very complete *résumé* excerpted from *Nature* which favors the other side of the question; in the same columns also is reproduced the editorial utterance of the *Medical Record*, which is fairly conservative. Again, one of the strongest arguments in relation to Behring's curative serum will be found on page 136 of THE MEDICAL AGE for March 10th of the present year.

The antitoxine treatment of diphtheria has been condemned by Virchow, Rosenbach, Semmola, Buchner, and many of the most scholarly and able of the professional minds of Europe—it has not had sufficient trial in the United States for such to be brought into evidence. On the other hand, Baginsky, Roux, Behring, and Ehrlich, and a score of followers, write most enthusiastically of the results obtained.

The *rationale* of the theory, as thus far outlined, is not at all apparent, yet there is a large amount of positive evidence which if accepted goes to prove that all the philosophy of physiology as taught is not true. In spite of our adverse judgment we are compelled to admit much of this evidence is of considerable weight and entitled to careful consideration. Time and experience will undoubtedly determine the result. If good ensues, we shall be among the first to applaud; if the contrary, we shall be better satisfied with our preconceived judgment. The fact that the theory has an empirical basis matters little if the treatment tends to deplete, by ever so small percentage, the ravages of a disease which, among the younger portion of the community especially, is so terrible in character and so heart-rending in results.

CASCARA SAGRADA IN THERAPEUTICS.

We have before commented in these columns on the rage for palatable medicaments whereby therapeutic efficacy is entirely lost sight of in an endeavor to cater to elegant pharmacy; and in no single instance is this more apparent than with Cascara Sagrada (*Rhamnus Purshiana*).

It must be understood that of fluid preparations the extract alone is the true representative of the bark, and that the latter, if the preparation is to be satisfactory, should be at least two years old, since in the curing process the contained ferment has time to exhaust itself upon the glucoside, which latter is thus changed into a bitter principle. —This is in accordance with the investigations of a number of expert chemists, who likewise discovered that so long as the bark remains on the tree this process is practically continuous, but no sooner is it stripped therefrom than the formation of both ferment and glucoside is inhibited; thus with the lapse of time the fermentative process is arrested —in this we find the *raison d'être* of the demand which finds expression in foreign pharmacopœias, that the bark of the *Rhamnus Purshiana* shall be stored for many months ere it is employed as a medicament; and notably the severe griping which sometimes follows the administration of this drug can be invariably traced to the employment of the fresh or imperfectly cured bark

Manufacturing pharmacists when handling Cascara should be careful not to destroy the bitter principle, but endeavor by skillful manipulation to secure a pleasant flavor by embodying the drug in elixir or cordial form. Tasteless Cascaras, however, are in the market, and these afford *prima facie* evidence that the true activity of the drug is sacrificed to palatability. In these the bitter principle is eradicated, and the virtues of the product as a general intestinal tonic are thereby in no small degree inhibited. Some of the preparations called tasteless, however, possess marked bitterness, and such invariably prove the most active; indeed, the degree of "tastelessness" depends entirely upon the amount of boiling the drug receives in connection with an alkali.

To make from a so-called tasteless Cascara an aromatic preparation, is the simplest of processes, since it requires only the addition of large quantities of liquorice in connection with due proportions of aromatics. There is little taste to destroy, consequently the product may be rendered as palatable as the manufacturer may choose; but, as already remarked, such preparations are notoriously lacking in that peculiar tonic-laxative action

which constitutes the only superiority of the drug over common buckthorns like *Rhamnus frangula*, *R. cathartica*, and *R. Wightii*. Not alone have these preparations tended to impair the usefulness of the drug, but they have caused Cascara to fall not a little into disrepute, alike among the medical profession and the laity, both of whom oftentimes make no distinction between efficacy and palatability so long as the chief title is retained.

It is not pretended that aromatic and tasteless Cascaras are absolutely inactive, since they all produce a laxative effect, and many of them are strongly fortified or sophisticated with cathartic elements. But catharsis is the least of the therapeutic claims for Cascara; in this respect many drugs are superior thereto. But we reiterate, it is the tone imparted to the muscular coat of the intestines, and the property that tends to aid digestion and stimulate assimilation, that constitutes the true value of the drug to physician and patient—properties entirely lacking in the more palatable preparations. The fact remains, then, that tasteless and aromatic preparations of Cascara are no more efficacious than the ordinary preparation of buckthorn, and from a monetary standpoint are even more objectionable than the latter.

It seems to be a widely disseminated error regarding Cascara that it is intended to supply the place of a cathartic. No greater mistake can be made. Its laxative power depends solely upon increased duodenal and hepatic secretions, hence any catharsis that results upon its administration must necessarily be due to secondary action; where such effect is desired, Cascara should be preceded by a true cathartic, or at least by a saline aperient, or its action may be very much favored by the judicious employment of glycerin suppositories.

The general experience of the physician is that where there is lack of intestinal tone, the administration of Cascara fluid extract three times daily proves readily restorative; that the first evidence of its action in this direction is afforded through hypersecretion, or, in other words, when it becomes too freely laxative. It is now the intermediate dose should be dropped; later on the morning dose will also require to be dropped, that at night alone continued, and this in time can usually be gradually reduced with great satisfaction to prescriber and patient.

Again, it should be remembered the action of Cascara is somewhat slow—slow but sure. It requires usually about twelve hours before it produces a decided impression; hence many are apt, in their haste, to overdo its administration, when arise those griping effects which too often are condemned as a fault of the drug instead of an error on the part of the prescriber.

FACILIS EST DESCENSUS AVERNI.

Truly the road to evil is both easy and slippery. The extreme depths of degradation to which individuals will proceed when once they have swerved from "the straight and narrow path," animated by a craze for filthy lucre, are almost impossible to conceive of—as witness the following excerpted from the St. Louis *Daily Globe-Democrat* of November 12th:

A BASE-BALL ROW.

. . . A man who traveled with the Giants during the last half of their present season, . . . equally a friend of the star pitcher of the Giants and . . . the Orioles, is responsible for the current row. A few days after the final Temple Cup game had been won by the Giants, a party made up of ball-players and actors were seated around a table at a New York club discussing the recent event, when the man above referred to said: "Boys, you are all wrong. I know how these games were won. Two of the Giants made the telling plays in the Temple Cup games, just as they did two weeks ago in Chicago. . . . The first game that day was won by a terrific hit over the left-field fence in the seventh inning. In the second game a long hit to right in the fourth inning won out. I could follow every game played and show you how at a critical point one or the other of these two men rose to the occasion. You wish to know why these two particular men, and how they did it? This is the solution." The speaker held between his finger and thumb a diminutive three-cornered blue phial. He continued: "May be, you all do not know that R—— . . . is a pretty good doctor. . . . When we got to Washington he asked W—— and myself to go with him one morning to call on a doctor who is supposed to be thoroughly up in Isopathy. The visit was most interesting, and when we left, R—— and W—— had promised to test the virtue of the elixir contained in these little bottles. The opportunity occurred in Chicago September 18th. The score was 1 to 1,

each team having tallied in the sixth. . . . R—— was now up, but before taking the bat I saw him pass something to his mouth and then look up for quite two minutes. His eyes brightened and the veins across his temples and the arteries down his neck knotted like cords as he stood at the plate. . . . R—— met the ball . . . and he put his 230 pounds in the lunge he made; . . . the ball was bound for the outer world, and would not have stopped if the fence had been twice as high. Three runs were tallied, and, as it proved, they were just about the number needed.

"As R—— dropped down on the players' bench beside me all breathless from the home run, he managed to pant, 'Charlie, the elixir is a "Jim-dandy."' R—— did not play in the second game that day, but just before W—— went to the bat in that critical fourth inning he gave him a dose from the blue phial. The effect was marvelous. W——'s strength seemed to be doubled and he whacked out that hot liner to right which saved the game to the Giants. . . . Those two boys have used it ever since, except in Pittsburg, when a new supply of the stuff failed to arrive. The Giants lost that game, but won the next day when the package arrived. They used the Washington physician's elixir in every Temple Cup game, and I tell you that is the secret of the Giants holding that trophy to-day. R—— and W—— will both tell you so."

. . . Anson of Chicago, hearing it, . . . claimed that the effect of ——'s Cerebrine, the extract of the brain of ox, is to add immediate strength to the player, and thus place his opponent at a great disadvantage. . . . He sent copies of the protest to every club in the league.

From a small beginning a tempest has arisen, which bids fair to end only when the question shall have been decided as to the rights of players in regard to utilizing scientific methods for adding to their dynamic value during the progress of ball games.

Can the descent be greater! Surely the animal-extract business has sunk to a level far below anything that could have been heretofore surmised. The mask is off—*Parturiunt montes, nascetur ridiculus mus!*

HOW TO GIVE PILLS TO CHILDREN.

In a recent issue of the *Virginia Medical Monthly*, Doctor Bond, commenting upon the inability of small children to swallow pills without chewing, says the administration of certain ill-tasting drugs to such patients is often very difficult, and in many cases the difficulty becomes a serious hindrance to essential treatment. He therefore points out an efficacious method which he has personally for a long time put in practice, to wit:

Supposing quinine to be the indicated medicament, it is worked into pills with aromatic sulphuric acid. The mother is directed to break up each pill and mix it with a little brown sugar, the mixture being put on the tongue dry, when a mouthful of water will carry it into the stomach. Sometimes sweet chocolate is used instead of brown sugar, or taken into the mouth after the bits of quinine pill and sugar, or a stick of liquorice-root may be employed in the same way. A very little of the masking substance suffices at each dose. A pill of quinine made with aromatic sulphuric acid is not only very soluble, but presents the medicament in the smallest possible bulk.

Doctor Bond adds: "It will readily be seen that by means of the pill broken with brown sugar or other masking agent, or any mixture of the drug which can be made into pill form, it may be administered to children with facility." Since it occurred to the author to try this method he has never felt the need of a masking mixture for such prescription; "moreover the mothers of the children take kindly to the plan."

But why employ pills at all when there are much better and more ready means of administering unpalatable medicaments? The best pharmaceutical houses now manufacture empty gelatin capsules, which cover every demand; and these are made in such small sizes that children readily swallow; moreover, two or more capsules may be employed, if necessary, to bring the dose of the medicament up to a maximum.

Then there is the much more elegant soft elastic filled capsule which is ingested with the greatest ease even when of apparently abnormal size—it goes without saying that they may be employed of equal size with the ordinary bolus of food.

Finally, quinine is more satisfactory therapeutically when the *muriate*—a salt that is much more readily soluble, more active, and less likely to cause cinchonism, than any other—is employed, and especially if prescribed in acid solution. Adults often prefer whiskey as a vehicle; and the alcoholic certainly, if not in excess, facilitates both solution and absorption.

EDITORIAL NOTES.

The Morning Visit.—

[We are indebted to the *Canada Lancet* for the following from the pen of Oliver Wendell Holmes. This poem appears in only one, and that a very rare, edition of the "Autocrat's" works.—ED.]

A sick man's chamber, though it often boast
The grateful presence of a literal toast,
Can hardly claim amidst its varied wealth
The right, unchallenged, to propose a health.
Yet though its tenant is denied the feast,
Friendship must launch his sentiment at least,
As 'prisoned damsels locked from lover's lips
Toss them a kiss from off their finger tips:—

The morning visit; not till sickness falls
In the charmed circle of your own safe walls,
Till fever's throb, and pain's relentless rack,
Stretch you all helpless on your aching back—
Not till you play the patient in your turn
The morning visit's mystery you learn.
'Tis a small matter in your neighbor's case
To charge your fee for showing him your face;
You skip up stairs, inquire, inspect and touch,
Prescribe, take leave, and off to twenty such.
But when, at last, by Fate's transferred decree,
The visitor becomes the visitee—
O, then indeed it pulls another string,
Your ox is gored, and that's another thing.
Your friend is sick—phlegmatic as a Turk
You write your recipe and let it work;
Not yours to stand the shiver and the frown
(And sometimes worse) with which your draught
goes down.
Calm as a clock, your knowing hand directs,
"Rhei, jalapæ—ana grana sex,"
Or traces on some tender missive's back,
"Scrupulos duos—pulveres ipecac,"
And leaves your patient to his pains and gripes,
Cool as a sportsman banging at his snipes.
But, change the *time*, the *person*, and the *place*,
And be *yourself* the "interesting case,"
You'll gain some knowledge which it's well to
learn—
In future practice it may serve your turn.
Leeches, for instance (pleasing creatures, quite)—
Try them, and, bless you! don't you find they
bite?
You raise a blister for the slightest cause;
But be yourself the great sublime it draws,
And, trust my statement, you will not deny
The worst of draughtsmen is the Spanish fly.
It's mighty easy ordering when you please
"Infusum sennæ—capiat uncias tres."
It's mighty different when you guzzle down
Your own three ounces of the liquid brown.
"Pilulæ"—"pulveres"—pleasant sounds enough,
When other jaws receive the shocking stuff;
But, oh, what flattery can disguise the groan
That meets the gulp that sends it through your
own?
Be gentle, then; though Art's inspiring rules
Give you the handling of her sharpest tools,
Use them not rashly—sickness is enough.
Be always "ready"—but be never "rough."
Of all the ills that suffering man endures,
The largest fraction liberal Nature cures;
Of those remaining 'tis the smallest part
Yields to the efforts of judicious Art.
But simple kindness—kneeling by the bed
To shift the pillow for the sick man's head,
To give the draught that cools the lips that burn,
To fan the brow, the weary frame to turn—
Kindness untutored by our grave M.D.'s,
But Nature's graduate, whom she schools to please—
Wins back more sufferers with her voice and smile
Than all the trumpery in the druggist's pile.
Once more—be quiet coming up the stair;
Don't be a plantigrade—a human bear—
But stealing softly on the silent toe
Reach the sick chamber, ere you're heard below;
Whatever changes there may meet your eyes,
Let not your looks proclaim the least surprise;
It's not your business by your face to show
All that your patient doesn't wish to know.
Nay—use your optics with considerate care,
And don't abuse your privilege to stare.
But if your eyes should probe him overmuch,
Beware still further how you rudely touch;
Don't clutch his carpus in your icy fist,
But warm your fingers ere you take the wrist.
If the poor victim needs must be percussed,
Don't make an anvil of your patient's bust.
Doctors exist, within a hundred miles,
Who thump a thorax as they'd hammer piles.
If you must listen to his doubtful chest,
Catch the essentials and ignore the rest.
Spare him—the sufferer wants of you and art
A track to steer by—not a finished chart.
So of your questions—don't, in mercy, try
To pump your patient absolutely dry.
He's not a mollusk squirming in a dish;
You're not Agassiz—and he's not a fish.
And last, not least, in each perplexing case,
Learn the sweet magic of a cheerful face,
Not always smiling—but at least serene;
When grief and anguish cloud the anxious scene,
Each look, each movement, every word and tone
Should tell the patient you are all his own,
Not the mere artist—purchased to attend—
But the warm, ready, self-forgetting friend,
Whose genial visit in itself combines
The best of tonics, cordials, anodynes.
Such is the visit that from day to day
Sheds o'er my chambers its benignant ray.
I give him health who never cared to claim
Her babbling homage from the tongue of Fame.
Unmoved by praise, he stands by all confessed
The truest, noblest, wisest, kindest, best.

Death of Doctor Wm. Goodell.—

This gentleman, whose reputation as an author, teacher and gynæcologist is world-wide, died at his home in Philadelphia, Pennsylvania, October 27th.

His demise is universally regretted, and involves a serious deprivation to the younger members of the profession, who benefited far more by his teachings than by those of any other gynæcologist in the United States. Few are so thorough in their attempt to convey knowledge, fewer so frankly conservative, none so willing to afford others the benefit of their own failures.

In private life he was genial and whole-souled, with a vein of the richest humor, which only rarely found vent in his writings. A review of a work on obstetrics, that appeared in the *American Journal of the Medical Sciences* some years since, from his pen, deserves perpetuation as a specimen of the very highest class of American wit; it was the cause of withdrawal from the market of a crude, ill-devised volume and its replacement by another, more carefully prepared by its author.

The Oldest Man Living.—

A Frenchman, now living in Russia, is said to have attained the age of one hundred and twenty-six years. From an account of his life, published in a Muscovite journal, it appears he was born in Paris in 1768, and has a lively recollection of the "Reign of Terror." He joined Napoleon's army in 1798, and fought in the battles of Austerlitz and Jena, besides sharing in the Egyptian and Spanish campaigns. He was one of the 400,000 who followed Napoleon to Moscow.

What Next?—

It is now definitely reported that Koch, of tuberculin fame, has become a convert to hydrotherapy pure and simple. At all events he has placed himself under the care of Father Kneipp, the clerical water-cure fanatic.

Our Designation.—

We would respectfully call the attention of certain of our contemporaries to the fact that our designation is THE MEDICAL AGE, and not "*Exchange.*"

Items and News.

Country's Movin'!—

Say your say an' sing your song—
Country's movin' right along!
Spring or summer—hail or snow,
Country's always on the go!

Puffin', blowin',
Hot, or snowin',
Always goin',
Goin'!
Goin'!

Say your say by night an' day—
Country's happy on the way!
Spite o' weather, spite o' crops
Always goin'—never stops!

Puffin', blowin',
Makes a showin',
Always goin',
Goin'!
Goin'!

Stormy skies, or weather fair,
Country's got the roadway clear!
Storms may howl, or bells may chime,
Country's goin' all the time!

Puffin', blowin',
Reapin', sowin',
Always goin',
Goin'!
Goin'!

—*Atlanta Constitution.*

The Original Package and Proprietary Remedies.—

The original-package method is altogether wrong and should be abolished. If any certain manufacturer can, by superior skill and methods, produce preparations of higher standard, he will not lose his trade. Place the standard high, and none should grumble save the unworthy. Aside from the unprofessionalism in aiding the sale of proprietary articles, the physician often forgets what his patient pays for in the way of advertising when he is using them. For example, a combination of the hypophosphites and cod-liver oil is a recognized desired pharmaceutical preparation, as the countless number on the market goes to prove, but there is no reason why it cannot be prepared and sold in bulk and therefore save the consumer the expense of advertising and "original package."

Phthisis Pulmonalis.—

Nearly one-fifth of the human race die from consumption or some other form of pulmonary disease.

Needle-makers are more subject thereto than any other occupation; next, in rotation, come file-makers, lithographers, grinders, to-

bacconists, watch-makers, stone-cutters, glass-workers, hair-dressers, weavers, painters, printers, shoemakers, glaziers, hatters, carpenters, masons, millers, brewers, tanners, bakers, butchers, charcoal-burners, and last of all, miners.

Iceland has the fewest cases of any country or region on the globe—evidence that cold, dry climates, especially in winter, tend to inhibit the disease, and that such rather than southern climes should be the refuge of the consumptive.

A New Association.—

A Medical Library Association was recently organized in Grand Rapids, Michigan. The purpose is the formation of a reference library upon medicine and allied sciences. The new organization starts out with a membership of about fifty, composed not alone of physicians, but dentists and pharmacists as well. One of the features of the association will be the admission of non-residents to membership, whereby, for a small annual fee, physicians outside of the city may avail themselves of the advantages of the library.

The following are the officers: President, G. K. Johnson; Vice-President, S. G. Milner; Treasurer, W. A. Dorland; Secretary, Reuben Paterson.

The Value of Petroleum Products in Medicine.—

I wish to call attention to the imposition that has been practiced in the sale of refined products of petroleum. A bland oil which would not become rancid was for a long time sought, until found by refining petroleum. The manufacturers reaped a large revenue therefrom under the first trade names. Soon they brought forward the selfsame product under a new name, with the usual long and loud testimonials, at a price far in advance of the former. This they have periodically repeated until there is a score of these preparations, all practically one and the same thing.—Doctor S. D. Van Meter, in *Pittsburgh Medical Review.*

Doctor Alexander Harkin.—

This gentleman, long a resident of Belfast, Ireland, and a well known contributor to medical literature, died in the latter part of October. His loss will be felt not alone in the United Kingdom, but in all civilized medical countries.

Puerperal Convulsions.—

Even when the spasms are apparently under control, their return may be confidently expected if the pupil remains contracted.

Book Reviews.

The Peterson Magazine. Price, 10 cents; $1.00 a year. Penfield Publishing Co., Philadelphia and New York.

The October number contains: "San Gimignano Delle Belle Torri," by Elmer Ellsworth Garnsey; "Christopher Marlowe, Dramatist," by John B. Carrington; "Nature's Palace and the Sunken Ship," by Clarence Hawkes; "The Chronicle of Cora," by Edgar Fawcett; "The Weed and the Flower," by Charles L. Hildreth; "The Afterglow," by Titus Munson Coan; "Character-Reading by the Hand," by Mary Field Hammond; "A New Jonathan and David," by John Patterson; "Here's a Glass to Old Time," by S. Q. Lapins; "Frederick the Great and Sans Souci," by J. Matthewman; "Idealism versus Realism," by E. H. Haight; "The Day of the Circus," by Robertus D. Love; "There's Witchery in Autumn," by Louis Worthington Smith; "Susanne," by Eleanor B. Caldwell; "In Fodder Gettin' Time," by Ellen Frizell Wycoff; "Religion and Painting," by Alpha G. Kynett; "Patience Appleby's Confessing-up," by Ella Higginson; "As Gold in the Furnace," by Charles Saylor; "The Weed Rose," by Howard Hall. By The Fireside: "Under the Locusts," and "A Mountain Dance," by Marie Nantz; "Under the Ain Roof-Tree," by E. B. W.; "The Robber," by Wardon Allan Curtis.

The Globe Quarterly Review. Price, 50 cents; $2.00 per year. Edited by William Henry Thorn. Published by Globe Review Co., Philadelphia and Chicago.

The contents of the September number are: "Wreck of the Mayflower," "Where Are We Going To," "Life of Bismarck," "Mr. Mountebank Stead," all by the editor, Mr. W. H. Thorn; "Ideals of Art," by Louis James Black; "Latin vs. Saxon Colonization," by Reverend M. F. Howley, D.D.; "Swinburne," by A. F. Schuman; "Knowledge and Belief," by W. B. Claxton; "Fate Immutable," by Henry S. Webster; "Tenderness," by Mrs. C. S. Hazlett Bevis; "The House on the Hill," by E. A. Robinson; "The Burne-Jones Phase of Art," by Caroline D. Swan; "Joan of Arc Again," by Reverend M. J. Marsile, C. S. V.; "Prohibition Not the Solution," by Edward H. Larkin; "Thoughts on Poetry," by Edward P. Buffett; "A Persian Retrospect," by Anna Cox Stephens. The poetry of the number is by W. H. Thorn, A. F. Schuman, Amelia Vail, E. A. Robinson, Virginia Cecil, and Anna R. Fitz Gerald.

THE COSMOPOLITAN. Price, 15 cents; $1.50 per year. Cosmopolitan Publishing Co., New York.

The show of distinguished beauty, transfixed by famous artists, which is now taking place at the Academy of Fine Arts in New York, has been anticipated by *The Cosmopolitan* magazine in its November issue, in an article by Wm. A. Coffin, with illustrations of some of the more beautiful faces. The "Great Passions of History" series has for this month's subject the romantic career of Agnes Sorel, who influenced the destinies of France under Charles VII. "The Art Schools of America," "The Great British Northwest Territory," "The Chiefs of the American Press," and the "Public Library Movement," are amongst *The Cosmopolitan's* table of contents. Survivors of the war and their children will find intense interest in "The Story of a Thousand," a personal narrative begun in this number by Albion W. Tourgée, who tells in a graphic way of a regiment which saw fierce service—of its organization, its marches, its sports, and its death-roll.

LITTELL'S LIVING AGE. Price, 15 cents; $8.00 per year. Littell & Co., Boston.

This, the Nestor of eclectic periodicals, makes a most attractive and generous offer to new subscribers by promising to send to all now remitting for 1895 the weekly issues for the remainder of this year absolutely free As this magazine in this busy age is well-nigh indispensable to every reader who desires to keep informed of the literary activities of the day, this will prove a most tempting offer, and the best single expenditure for a library periodical that can be made.

LIBRARY PORTRAITS. Published by the Pabst Brewing Co., Milwaukee.

The Pabst Brewing Co., well known also as the authors and manufacturers of Best's tonic, have published five beautiful pictures suitable for libraries, entitled respectively: "Secrets;" "Another Secret;" "The Love Letter;" "The First Letter;" "Perfection"—all most elegant specimens of the art of photogravure. They average about 24x30 inches, and the entire series can be had by physicians at a mere nominal figure by addressing the publishers. Moreover, they are not disfigured by any advertising material. Write for them and you will be amply repaid. Physicians may likewise obtain a sample of Best's tonic through the same source, which is really an excellent porter and sold at the extremely reasonable rate of $2.50 per dozen, or 25 cents per single bottle.

THE PHYSICIAN'S PERFECT CALL LIST AND RECORD. By Doctor G. Archie Stockwell, F.Z.S. Flexible morocco; long 16mo; pp. 200. Price, $1.50. George S. Davis, Detroit.

The fact this publication has reached its *ninth year* is sufficient evidence of its popularity and practical usefulness. Its paper and binding are alike superb. In size and shape it is by long odds the most convenient and the best of the "Visiting Lists;" moreover, it will not crumple or break down in the pocket.

A prominent feature is the absence of all advertisements and other "dead-wood," and the extremely convenient arrangement of its most practical contents. Of the information afforded, that most demanded for ready reference is to be found upon the inside covers or on the fly-leaves. The posological information and dosage table are to a great extent new departures, being very thorough and complete; further, the latter is newly revised, and embraces the very latest (including the non-official) remedies introduced, up to and inclusive of July, 1894.

Especially commendable is the obstetric table in two colors, and the arrangement for the concise keeping of all accounts, debit, credit, expense, profit and loss, loans, etc. No physician can afford to be without this work.

ARCTIC ALASKA AND SIBERIA. By Herbert L. Aldrich. Paper; 16mo; pp. 234. Price, 50 cents. Rand, McNally & Co., Chicago and New York.

The author while living at New Bedford found a most interesting and fascinating study in the whaling industry. He also discovered the subject of Arctic or bowhead whaling had been untouched by any author except in a most general and meager manner, although it offers much the largest material for the writer. It is carried on in a region beset with inconceivable dangers and risks—in a region practically unknown, although visited by whalemen annually for fifty years. Mr. Aldrich therefore took it upon himself to make a cruise in 1887 to the Arctic, entering by way of Behring Straits, and the results of this cruise are most comprehensively yet briefly pictured in the book, which is also illustrated from photographs taken by his party. He graphically describes the whaling grounds, the natives on either side of the Behring Sea and the straits of the same name, and also of the northern or Arctic coast of North America and corresponding coast of Siberia, giving his views of the regions that are practically unknown except to the whaling fraternity. No one can pick up this book without keen enjoyment, and it is a great regret when at last finis is reached.

SANDOW ON PHYSICAL TRAINING. Edited by G. Mercer Adam. Cloth; square 16mo; pp. 244. Price, $3.50. J. Selwin Tait & Sons, New York.

Sandow is conceded to be the strongest man physically at present living, and this volume gives on his own authority his simple method of physical education, views on the physiology of gymnastics and the function of the muscles, together with a comprehensive biographical sketch. It is moreover profusely illustrated with photographs from life. Sandow's system is simplicity itself; it does not deal with abstinence, with starvation or wearing methods, but comprises temperance in everything, with just enough work (continuously performed) to keep the muscles in tone. Among the chapters of especial value are those on "Hygiene and Medicines;" "Gymnastic Exercises and the Bodily Functions;" "The Value and Relations of the Muscles," etc. It may be well to remark in this connection that Sandow is less than thirty years of age, and that during the first ten years of his life, although healthy and well formed, he gave promise of anything but excess of strength. His remarkable power has been developed as the result of training.

TRANSACTIONS OF THE AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS. Volume X. Cloth; 8vo; pp. 719.

This large, closely printed volume shows the eminent activity now existing in the field of electrical mechanism, and indicates the necessity for constant study on the part of those who desire to keep abreast of the latest phases of this science. The papers embodied are of inestimable value. Notable among these are: "Electrical Record Meters;" "Economical Aids of Incandescent Lamps;" "Action of Continuous Ordinary Current on Fuse Metals;" "A Modified Deprez-d'Arsenville Galvanometer;" "The Variation in Economy of Steam Engines Due to Variation in Load;" "Diseases of Dynamos;" "Heat of Armature;" "Electricity in Medicine;" "Practical Aspects of Low, Frequent Electrical Resonance."

The volume is one of superlative interest to anyone interested in mechanics, even though not *per se* an electric specialist.

DISEASES OF THE CHEST, THROAT, AND NASAL CAVITIES. By E. Fletcher Ingals, A.M., M.D. Cloth; 8vo; pp. 718. Price, $5 00. William Wood & Co., New York.

This volume presents in convenient form the known facts relating to diseases of the respiratory tract and circulatory organs. The fact that there is a demand for a new edition evidences the favor with which this work has been received, and it has been fully brought up to date in all the subjects treated of, a large number of pages having been added. Fifteen chapters are devoted to consideration of "Diseases of the Chest;" fourteen to "Diseases of the Throat;" seven to "Diseases of the Nose;" one to "Diseases of the Thyroid and Œsophagus." Of especial value is the Appendix with its many formulas. We bespeak for it a wide circulation.

SYLLABUS OF LECTURES ON HUMAN EMBRYOLOGY. By Walter P. Manton, M.D. Cloth; 12mo; pp. 126. Price, $1.25. F. A. Davis Co., Philadelphia.

This is a very concise and complete introduction suitable to medical students and practitioners who desire a thorough and substantial basis to the study of obstetrics and gynæcology. As a rule, volumes of this class are rarely of such merit as to be entitled to special commendation; we are happy to say, however, that this proves a notable exception, and that too high words of praise cannot be given.

A valuable addition to the volume is the blank interleaving for the adding of notes. The outline illustrations are very superior.

A MANUAL OF HUMAN PHYSIOLOGY. By Joseph H. Raymond, A.M., M.D. Cloth; 12mo: pp. 382. Price, $1.25. W. B. Saunders, Philadelphia.

The author's experience has led him to conclude that, owing to the short time allotted to the study of physiology in medical schools, students can assimilate only the main facts and principles of this branch of science; and that if there were time to investigate farther, such would be profitless during the formative period. In consequence Doctor Raymond has endeavored to prepare a manual which should be a concrete and available outline of physiology, leaving most of the details to be filled in after graduation.

ESSENTIALS OF HOMŒOPATHIC MATERIA MEDICA. By W. A. Dewey, M.D. Cloth; 16mo; pp. 294. Price, $1.50. Boericke & Tafel, Philadelphia.

Doctor Dewey has done the medical profession a vast amount of service in compiling and publishing this work. It is not only available for practical purposes to the homœopath, but is valuable to any student who desires an insight into homœopathic materia medica and a knowledge of homœopathic remedies. Indeed, it presents the essentials of homœopathic medicine in such a way that physicians of all classes can utilize the work to advantage.

Therapeutic Brevities.

The Properties of a True Antipyretic.—The substance to be used medicinally for the purpose of reducing temperature must have three qualities:

It must be antiseptic:

It must be volatile:

It must have the slightest solubility in blood.

If it is not antiseptic, it is negative in its action as a suppressor of heat; if it is not volatile, it accumulates in the blood and tissues, acts then as a foreign body toxic in its nature, and itself causes secondary symptoms which are mischievous and unnecessary, taxing active eliminative organs, like the kidney, to an undue degree; if it be very soluble in the blood and in the fluids of the tissues, it is the more objectionable on account of its fixation and slow elimination.

The value of ammonia rests largely on its possession of the three qualities just enumerated. It is a splendid antiseptic, is volatile, but too soluble and too powerful as a solvent. Given in sufficient doses to check the animal fire, it dissolves the red corpuscles, prevents the free absorption of oxygen from that effect, and by its presence in the blood also tends to prevent oxidation.

Chloroform is a splendid antiseptic; it is volatile; feebly soluble in blood; does not produce any fixed toxic symptoms nor tax the eliminatory organs, unless it be pushed to anæsthesia. The author has used it for over forty years as an antipyretic and with satisfaction, but the difficulties of its correct administration have stood much in the way.

Hydrate of chloral is more manageable. It is an antiseptic, it turns into chloroform and sodium formate in the body, so that it is both volatile and eliminative, and, unless pushed too far, is not toxic. When it kills it is by a large dose and by reduction of the body temperature. As an antipyretic it surpasses all others. "Indeed, it is, without doubt, when correctly administered, an admirable remedy for pyrexia, and in enteric fever it is, I believe, the best."—SIR BENJAMIN WOOD RICHARDSON, in *The Asclepiad.*

Cod-liver Oil and its Substitutes.—Among the preparations of Cod-liver Oil, there exist some of unquestionable genuineness and eligibility, but others worthless, clothed in deception, and made only for gain. It is doubtful if any emulsion on the market will stand the test of analysis; of those which I have examined not one has contained the quantity of oil claimed. The rankest frauds among these preparations are those claiming to contain the active principles of Cod-liver Oil represented by what is left after extracting the oil; and we are asked to believe that these, though containing no Cod-liver Oil, will take its place.

"——'s Wine of Cod-liver Oil" and "——'s Preparations of Cod-liver Oil" may be mentioned; preparations, perhaps, of some tonic power due to aromatics and wine, and, if they contain the bile salts, etc., from Cod-liver Oil, *they may aid in the assimilation of fats*, but they are sold as representing Cod-liver Oil, which is a great deception and fraud.

Then there are the worthless hydrocarbon articles, sold under different names. These are preparations of more or less *lubricating* properties, but not of chemical composition to enable them to take the place of Cod-liver Oil. In one of the circulars with which the —— Company seek to convince the medical profession that their wonderful nostrum is worthy of notice and is a doctor's *vade mecum*, a certain Washington M.D., after having nauseated two pussy cats with large doses of the compound, and finding several hours later, when their lives had been offered up as a sacrifice, that there was but a trace of oil in their intestines, and that in microscopical globules, comes to the conclusion that ——'s is a wonderful emulsion, easily assimilated and a great fat-maker. Such conclusions are ridiculous. He seems to have forgotten that the substance is a pure hydrocarbon oil and wholly incapable of being converted into fat; or else he knew too much to mention it.—DOCTOR S. D. VAN METER, in *Pittsburgh Medical Review.*

Rhus Poisoning.—Doctor Vogt, of Cleveland, Ohio, in the *Louisville Medical Monthly*, declares nothing will relieve the poisoning by rhus so quickly as a solution of *Grindelia robusta*. He prescribes:

℞ Extract grindelia robusta (P., D. & Co.'s), 4 drachms.
Distilled water, 8 ounces.

He applies to the affected parts either cold or tepid, and freely, with a sponge or cloth dipped in the solution.

"A few applications will often suffice for a cure, but if the disease has been of long duration several days may elapse before entire relief is obtained. In very bad cases a soft bandage should be applied to the parts and kept moist with the solution, and if necessary the latter reinforced by more of the fluid extract. The sufferings of the patient will be immediately relieved after the first application."

Apiol in Amenorrhœa and Dysmenorrhœa.—Experiments of Joret and Homolle have proved Apiol to be a valuable emmenagogue, and the observations of these gentlemen are confirmed by many other authorities. From a physiological point of view the drug is absolutely innocuous. In doses of from seven to fifteen grains (approximately minims) it induces slight cerebral excitement such as is caused by coffee; doses of thirty to sixty minims produce drunkenness. Its action on the uterus is analogous to that of digitalis on the heart, and to secure its full effects it should be given shortly before each period. —*The Lancet* (London).

Cranberries in Cholera.—Doctor Goriansky, a Russian physician, declares that the use of the pure and fresh juice of raw Cranberries, given freely, either undiluted or with an equal part of water, is an excellent means of relieving the thirst and vomiting peculiar to cholera. In fifty cases in which ice and narcotics failed to make the slightest impression, the Cranberry-juice in small but repeated doses rapidly checked both vomiting and nausea.—*National Druggist.*

Wild Yam in Bilious Colic.—Doctor A. E. Bacon writes that *Dioscorea villosa* is undoubtedly as much a specific in bilious colic as is quinine in intermittent fevers. The dose of fluid extract is from five to thirty minims—which may be doubled in emergency; of the solid extract one to four grains every one to four hours, according to urgency. The remedy is useful in flatulence and in cramps and spasmodic conditions of the bowels.

Iodoform Subcutaneously in Lupus.—In the *Journal des Maladies Cutanées et Syphilitiques*, Doctor Morel Lavaller reports excellent results obtained by the hypodermatic injection of Iodoform, dissolved in oil of petroleum, at a distance from the seat of disease. Improvement generally appears after twenty-four or forty-eight hours, and is well marked at the expiration of five or six days.

For Tæniæ.—Doctor Descroizelles recommends the following:

℞ Ethereal extract of male-fern, 2 drachms.
Calomel, 6 grains.
Peppermint-water, 150 grains.
Gum arabic, 75 grains.
Syrup, 5 drachms.
Distilled water, sufficient to make 2 ounces.

—*La Médecine Moderne.*

Medical Progress.

THE NEW TREATMENT FOR DIPHTHERIA.—Whenever a new remedy is suggested for a prevalent and formidable disease it is quite necessary to exercise a becoming conservatism regarding facts which bear on the possibility of a brilliant discovery. The history of all similar cures proves that the initiative reports are not always borne out by subsequent results, and that nothing more is gained by a discussion of relative merits of other remedies than the ventilation of a new theory and the final mortification of its ultimate rejection.

On the other hand, it must not be argued that students of therapeutics should be backward in seizing upon every plausible means to an end, or should neglect opportunities for the careful study of such data as may be presented with a proper spirit for deliberate judgment. Even in view of these apparent drawbacks we cannot resist the temptation of looking upon the antitoxine treatment of diphtheria as promising better than any that has heretofore been presented to the profession. Making due allowance for the remarkable percentage of cures, even in malignant cases, we can safely assume that if one-half of what is said of the antidotal power of the serum is true, we have made a most wonderful advance in the therapeutics of a most formidable and fatal malady. There is, indeed, enough encouragement in the astonishing results abroad to warrant an extended trial in this country.

The articles by Professor Baginsky of Berlin, and Doctor Louis Fischer of New York, in a recent issue of the *Medical Record*, were calculated to arouse a new interest in the subject by calling attention to some remarkable results. The mortality of diphtheria in Berlin during the three years preceding the trial of antitoxine ranged from 32.5 per cent. to 41.7 per cent. Baginsky broke this record in 192 cases by reducing the death-rate to 14 per cent., while in eighty-two additional cases, making in all 274, the average mortality was 15.3 per cent. More recent statistics give in sixty-three cases a fatality of 5.5 per cent. In France, Professor Roux lowered the death-rate from 51.71 per cent. to 24.33 per cent. Viewed as plain facts, the showing is certainly very remarkable.

The theory of the action of the antitoxine serum, from a bacteriological standpoint at least, is quite tenable, while clinically there are no obvious objections to its plausibility. It is in brief the transference of acquired immunity in an animal to a similar condition in

the human subject. The natural resistance to the disease, the vital energies which are aroused to overcome the enemy, are sufficiently reinforced by the immune serum to turn the balance in favor of a cure. In a like manner the antitoxine is claimed to act in a protective way for such as may be exposed to the disease, by a preliminary injection of immunizing serum, thus anticipating the evil effects of the disease by neutralizing its septic tendencies. So far the encouraging reports coming from Berlin and Paris are quite convincing, and, unless contradicted by more extended experience, warrant the brightest hopes for the future. There is certainly a singular agreement regarding the reduction of mortality as observed by different experimenters, which gives a truer scientific complexion to the facts than could be gained from partial sources or through biased channels. There is, then, every plausible reason why the antitoxine treatment should be thoroughly tested in this country. The great trouble at the start will be the scarcity of the remedy and the difficulty of obtaining it. This difficulty should be overcome as speedily as possible by extending its manufacture and in establishing necessary laboratories in different parts of the country. Thus far the only antitoxine that has been used in this country has come from abroad, and is now in such limited quantity as to be practically useless for purposes of extended experimentation. It is to be hoped, however, that ultimately the supply will meet the demand, and that opportunities will be afforded for such tests of the efficacy of this new remedy as seem to be warranted under existing circumstances.—*Medical Record.*

THE TREATMENT OF DIPHTHERIA BY ANTITOXIC SERUM.—Four years ago Professor Behring published his remarkable paper "On the Mechanism of Immunity against Experimental Diphtheria in Animals." In this memoir the author stated that it was possible to immunize animals against the diphtheria bacillus by the injection of cultures attenuated by heat or the addition of 1-in-500 trichloride of iodine to the cultivating medium. The same result could be obtained by the inoculation of the pleural exudation of animals dead of experimental diphtheria, or by the injection of chemical compounds, such as trichloride of iodine, after inoculation of virulent diphtheria-bacilli.

Behring's most important discovery, however, was that the serum of animals immune against the bacillus of diphtheria and its poisons had the power of "destroying" *in vitro* and in the animal body the chemical poison secreted by this bacillus; and that animals, after a mortal dose of diphtheria poison had been injected, could be not only immunized, but actually cured, by the introduction into their system of the serum of animals immunized against the specific bacillus and its poisons. In a further series of researches he found that the serum of such animals possessed this power to a most remarkable and almost incredible degree, and that the therapeutic value of this serum increased up to a certain extent with the amount of diphtheria-toxine which had been introduced into the system; whilst, on the other hand, the same toxine injected in too large quantities might cause the serum to lose its "anti-toxic" property.

Behring afterwards immunized large animals, such as sheep, horses, etc., against diphtheria by the repeated injection of diphtheria-toxine, and he observed that their serum was of great value when injected into human beings suffering from this disease. Before proceeding, however, it may be convenient to discuss these statements at somewhat greater length, and illustrate them by an account of a few experiments.

Let us draw some blood from a horse which has been thoroughly immunized against diphtheria, and decant the serum after its separation. We now take a filtered diphtheria-culture, a given quantity of which we know to prove fatal to a guinea pig of a certain weight in a certain number of hours. Let us divide, for instance, 5 Cc. of this filtered culture into five doses, and inject 1 Cc. into a guinea-pig (A) weighing 500 grammes, without the addition of any serum. Four other guinea-pigs of the same weight as the first receive the same amount of toxine and .1 Cc., .01 Cc., .001 Cc., .0001 Cc. of the horse's serum respectively. The first guinea-pig (A) will die in less than twenty-four hours; but of the others, the three first will recover without any symptom of illness, whilst the last, which has received .0001 Cc. only, will probably die after some delay. We know, then, that the dose of serum which will protect a guinea-pig of a given weight against a known amount of toxine injected at the same time as the serum, lies somewhere between .001 Cc. and .0001 Cc., and, by further experiments, the exact dose may be accurately determined. In this way we may form an idea of the strength of the serum, but we must always remember that the data thus obtained are but approximate ones.

The curative serum may be introduced into the animal the day before the toxine is injected, but in that case a much larger quan-

tity of serum will be necessary to protect the animal. If the serum be inoculated at the same time as the toxine, and in a different part of the body, the quantity of serum must also be increased if the curative effects are to be apparent. If some time is allowed to elapse between the injection of the toxine and that of the curative serum, the quantity of serum—in order to be effective—must be proportionately greater; but I have seen animals recover when the injection of the curative serum had been delayed *eleven hours* after the introduction of the toxine, which proved fatal to the control animals in twenty-eight to forty-eight hours. In this latter case the dose necessary to cure was 5,000 times that sufficient to immunize when the serum was injected with the toxine.

Can any opinion be formed as to the mechanism in which this serum exerts its action? The first explanation which suggests itself is that when the curative serum and the toxine are mixed together in the syringe or in the animal's body, the toxine is either destroyed or simply neutralized, just as the acid in a given solution may be neutralized by an alkali.

Yet there are several facts which negative this opinion, or rather which tend to prove that this destruction or neutralization of the toxine, if destruction or neutralization there be, is effected through the agency of the cells of the body. In the first place, if the whole were simply a chemical process, we should expect it to take place with mathematical precision. Thus, if .001 Cc. of horse's serum did destroy or neutralize 1 Cc. of toxine, this neutralization should be apparent whether the mixture be injected into a guinea pig, a rabbit, or a sparrow. But it is not so; on the contrary, it has been found that in certain animals a very small amount of curative serum is sufficient to render harmless a certain amount of toxine, when the same amount of serum utterly fails to do so in animals of another species. Even if the same species of animals be used, the curative effect will differ in intensity, according to whether the mixture be injected directly into the blood or into the subcutaneous tissue. Moreover, if a number of guinea-pigs be injected each with the same amount of toxine and varying doses of curative serum, it is of frequent occurrence that some animals will resist when they have received but a very small quantity of serum, while others, which have received equal or even larger quantities of serum, speedily perish. Had we to deal with a simple chemical neutralization or destruction of poison, identical results should occur in all animals. The action of the curative serum may also be inhibited by weakening the cells of the animal body by the action of bacterial or other protoplasmic poisons. Hence I consider that the term "anti-toxic," which has been used up to the present to denote this property of the serum, is only approximately correct; and I would prefer to substitute the word "curative," until such time as the mode of action of the serum has been accurately determined.

Before speaking of the application of this method to the cure of diphtheria in the human subject, and of the results which have been obtained in the hands of such experimenters as Behring, Roux, Ehrlich, Kossel, Wassermann, Heubner, and others, it must be pointed out how the disease in man differs from and resembles that produced experimentally in animals by the subcutaneous inoculation of the bacillus *diphtheriæ* or of its poisons. In both man and animals the symptoms are, to some extent, produced (Roux, Behring, Sidney Martin) by the absorption of the poisons secreted by this specific bacillus. But in man the production of these poisons is facilitated by the fact that the bacillus lives on the surface of the membrane, where it is exposed continually to the action of the air entering and leaving the lungs. Now, it has been shown experimentally that the easiest way of obtaining a large amount of diphtheria toxine from the diphtheria bacillus growing in an artificial medium, is to expose the surface of this medium to a current of air. In the respiratory passages of man these conditions are exactly fulfilled, and the bacillus is able to produce large quantities of toxine. In the second place, the upper respiratory passages are crowded with all sorts of non-pathogenic and some pathogenic micro-organisms, the chief among the latter being the staphylococcus *albus* and *aureus* and the various kinds of streptococci. These multiply on the soil prepared by the bacillus *diphtheriæ*, and secrete their toxines, which being absorbed add their poisoning action to the deleterious action of the specific bacillus. In the preceding paragraph I have drawn attention to the fact that the toxine of another micro-organism will inhibit the action of the curative serum; and there can be little doubt that the toxines secreted by these micro-organisms in man will have the same effect. The formation of the membrane also, and the mechanical obstruction so produced, may in themselves be the cause of death. It must be added, also, that diphtheria is chiefly a disease of the poor, and that in many cases the diagnosis is delayed and the treatment is not begun until the patient is almost moribund. It is plain, therefore, that in the diph-

theria of man we have all the conditions which are favorable to the production of the poison and the inhibition of the action of the therapeutic serum. Hence we cannot be astonished that the death-rate at the Hôpital Trousseau in Paris amounted during the last six months to 62 per cent. of all cases admitted for this disease and not treated with curative serum.

An examination of the statistics lately published by Doctor Roux, the eminent director of the Institut Pasteur, will allow us to form some idea of the value of the curative serum when applied to man. The reason for choosing these statistics is that they contain all the elements necessary to enable us to form an accurate opinion. The mortality among 3,971 children admitted during 1890–1894, and who were treated on ordinary lines, *i. e.* without curative serum, amounted to 51 per cent., the highest mortality being in 1890, when it reached 59 per cent., and the lowest in 1892, when it fell to 47 per cent. On February 1st, 1894, Doctor Roux began the inoculations. As soon as a child suffering from diphtheria was admitted into the Hôpital des Enfants Malades, it received 20 Cc. of serum subcutaneously, and if no improvement took place, 10 Cc. or more were injected next day. Four hundred and forty-eight children were thus treated from February 1st to July 24th, 1894, and 109 died, the mortality being 24.5 per cent. At the Hôpital Trousseau, on the other hand, 520 children were admitted during that period, and treated without the injection of curative serum. Of these, 316 died, giving a mortality of 60 per cent. This difference is striking enough; but it is even more marked when we come to analyze the results. In the first place, we must eliminate from Doctor Roux's statistics 128 cases which were shown by bacteriological examination not to be diphtheria. This mistake is perfectly legitimate, as it has been shown that without a bacteriological examination it is impossible to make an accurate diagnosis. The injection of the serum in a doubtful case is followed by no harm, and, as the result of the bacteriological examination cannot be known for twenty-four hours, the injection of the serum will, at any rate, prevent the child catching the disease from his neighbor. The mortality among such cases we know to be very slight, and in the statistics of previous years, as well as in those of the Hôpital Trousseau, these cases are included among the cures, so that the proportion of cures appears to be much higher than it really is. These cases being excluded from Doctor Roux's statistics, there remain 320 children in which the bacteriological examination revealed the presence of the diphtheria bacillus. Of these, 20 died on admission, before any therapeutic measures whatever could be employed. Of the 300 other children, 78 died, giving a mortality of 26 per cent. We may further divide these into uncomplicated cases, and those in which tracheotomy had to be performed for laryngeal obstruction. Of the uncomplicated cases the mortality in Doctor Roux's wards amounted to 12 per cent.; whilst at the Hôpital Trousseau, where no serum was used, the mortality during the same period reached 32 per cent. In the preceding years it was 33 per cent. in the wards in which Doctor Roux carried out his experiments.

Turning now to the cases in which tracheotomy had to be performed, we find that 49 per cent. of Doctor Roux's cases died. At the Hôpital Trousseau in the same period 86 per cent. of the tracheotomized children perished.

Similar results have been obtained in Germany, the mortality in some wards falling as low as 14 per cent. Professor Ehrlich has shown that the question of time is a most important element, and that the chances of obtaining a cure are infinitely greater when the remedy is applied at an early stage of the disease. The following table, reprinted from the *Deutsche Medicinische Wochenschrift*, will explain this:

Time elapsed from onset of disease to injection of serum.	Number of cases.	Number of cures.	Number of deaths.	Cures, per cent.
1	6	6	0	100
2	66	64	2	97
3	29	25	4	86
4	39	30	9	77
5	23	13	10	56.5

It will be noticed that the number of cures diminishes according to the length of time which has elapsed since the onset of the disease.

It appears to me to be difficult to explain away the results obtained in France and Germany by simply saying that the epidemic has been a mild one; for in other hospitals and institutions in which the curative serum has not been used, the mortality has remained the same or even increased. In fact, it is plain that the serum treatment of diphtheria is now established on a firm basis, and that it is only right that we should at once give the children in this country the benefit of the results of experimental investigation which has been principally carried on abroad.—M. A. RUFFER, in *Nature*.

The Medical Age.

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Original Articles.

PHYSIOLOGICAL IMPORTANCE OF THE SYMPATHETIC NERVOUS SYSTEM.*

BY PROFESSOR A. VON KOELLICKER.†

The portion of the nervous system which I purpose to discuss in detail is of special importance, since it presents functions which, on the one hand, display a high degree of independence of psychic processes—sensation, desire, and thought—yet, on the other, are remarkably and intimately interwoven therewith. In truth, the so-called ganglionic or sympathetic nervous system represents so peculiar a section of the general nervous system that ever since the last century science has been engaged in heated discussions of the question, whether it is independent of, or dependent on, the cerebro-spinal nervous system. Only in the very recent past have we gained an insight into this problem, which is now well worthy of a clear exposition. For better comprehension, it is essential that a glance be taken at the anatomical relations.

The nervous system of vertebrates generally consists of two principal divisions or sections: First, the brain and spinal cord; Second, the nerves radiating therefrom.

The latter are subdivided as follows: Into the so-called cerebro-spinal, which, quite apart from the higher nerves of perception (the olfactory, optic, and auditory), serve as nerves of motility and attend all the muscles subject to voluntary movement; also they serve as nerves of sensibility, transmitting the sensations of which we take cognizance through the skin, through certain mucous membranes and various other parts such as the muscles, sinews, joints, bones, etc.

But a second class of nerves—the ganglionic or sympathetic—are in the service of the involuntary functions,—those of the stomach, intestines, heart, vessels, and in general of the involuntary muscles; they further preside over the processes of secretion and nutrition, and transmit to consciousness only few and vague sensations.

The cerebro-spinal nerves proceed directly from the brain and spinal cord, and consist of many tiny unities—the so-called neurondræ. Every one of these neurondræ or branchlets is formed by a microscopic central body or nerve-cell, from which emanate one or more nerve-fibres—fine but strong filaments, not more than 0.02 to 0.03 millimeter in thickness, composed of an albuminous substance, so-called axis-cylinders; these are further provided with a fatty covering of nerve-marrow, and both together are termed dark-edged or marrow-bearing nerve-fibres. With the motoric neurondræ, which condition voluntary movement, the nerve-cells are seated in the gray substance of the cord and brain, and are many-rayed or multipolar; in other words, they possess many radii, of which but one—the so-called nervous or axis-cylinder continuation — is straightway covered with nerve-marrow and becomes a motoric nerve-fibre, while the others, or dendritæ, remain in the interior of the brain and cord, ramify intricately, and never receive nerve-marrow. The motoric nerve-fibres are threads of various length; without interruption they always proceed from the central organs to the muscles, and thus, under certain circumstances, possess a length greater than that of arm or leg.

The sensory fibres, on the other hand, have all their nerve-cells, outside of cord and brain, in certain tumefactions of the respective nerves, which are termed ganglia or nerve nodes. From these cells emanate sensory fibres—one proceeding as far as the centre into the gray substance of the cord

* An address delivered at the third general session of the Sixty-sixth Congress of Naturalists and Physicians at Vienna.

† Privy Medical Councilor.

and brain, a second toward the periphery, into the skin of all regions,—and these microscopical elements are also of the same colossal length as the motoric fibres.

Physiologically, the nerve-cells are to be regarded in part as organs of nutrition and in part as stimuli of the nerve-fibres. Thus, with the motoric cells, the impulse therefrom to the motoric fibres proceeds in cellulifugal or centrifugal direction, and in the same direction also is the produced action of the cells manifested, so that fibres separated from their cells die off; whereas with the sensory cells an obtained action on the nerve-fibres is alone established, and movement, without regard to the cells, proceeds from the periphery to the centrum in centripetal direction.

With this explanation let us now pass to a consideration of the ganglionic nervous system: In most vertebrates it consists of a coupled series of nerve nodes which, mutually united by shorter or longer connective cords, pass from the head to the coccyx on the ventral side of the vertebral column. Every cord, or the so-called ganglionic chain of the sympathetic, is now connected, on the one hand, with many nerves of the head and with all nerves of the spinal cord (gray and white *rami communicantes*), through branches of union which proceed to each ganglion; on the other hand, it sends forth a great number of ramifications that proceed to the vessels, the intestines, and the involuntary muscular system in general, there ending. At this terminal expansion of the sympathetic nervous system, are further to be found a certain number of larger ganglionic masses, among others the so-called solar plexus or "abdominal brain" situate directly under the diaphragm. Furthermore, in certain definite places are to be found a larger or smaller number of microscopic nerve nodes—which are present by millions in the intestinal wall. It is also important to remember that while the cerebro-spinal nerves all occur in pairs in the sympathetic system—which attends upon single organs originally located in the median plane, —unpaired parts are also to be found, as in the heart and throughout the intestine where the nerves accompany the unpaired arteries —formations which have received their most distinct expression in the unpaired intestinal nerves of birds discovered by Remak.

Regarded as a whole, the ganglionic nervous system, in accordance with the foregoing, sustains very definite relations with, and has the appearance of a greatly ramified branch of, the common cerebro-spinal nerves, provided with many nerve nodes.

The elements of the ganglionic nervous system are likewise microscopic unities or nerve-branchlets, each consisting of nerve-fibres and nerve-cells.

One form of nerve-fibres, those of Remak, are altogether absent from the course of the nerves in the cerebro-spinal system, but occur, slightly developed, at the last termini and at the beginnings of the nerve-fibres in the neighborhood of the nerve-cells; these are pale, marrowless formations consisting exclusively of the central thread or of the axis-cylinder of the ordinary nerve-fibres. Aside from these there are, in the ganglionic nervous system, dark-edged, marrow-bearing fibres, that anatomically possess a double significance; some represent simply the fibres of certain cerebral nerves and nerves of the spinal cord which through connective ramifications are merged into the sympathetic, while others belong to the sympathetic itself and take origin in its ganglia.

With frogs this fact has been perfectly established by Bidder and Volkmann, who, after thorough researches into the collective nervous system of this batrachian, declared the cerebro-spinal nerves are characterized by coarser nerve-fibres, the sympathetic however by special, fine, marrow-bearing nerve-fibres; the latter for this reason they term sympathetic and declare they are of peculiar importance, anatomically and physiologically, to the ganglionic nervous system.—This theory, so far as it bears on the peculiar nature of the so-called sympathetic fibres, was attacked by Valentin and by myself in conjunction with Glück, since it may be readily shown that thin, fine nerve-fibres are present in many other places than the sympathetic and do not represent any peculiar class of fibres. With respect, however, to the assertion that in the frog the fine, marrow-bearing fibres of the sympathetic all proceed from the sympathetic ganglia, I took sides with Bidder and Volkmann after a series of researches into this

problem, and we discovered in 1844 that the dark-eged nerve-fibres take origin in the nerve-cells of the sympathetic ganglia; two years later, Helmholtz ascertained the connection between nerve-cells and marrowless nerve-fibres in mollusks and crustaceæ.

According to Bidder and Volkmann it might appear that the frog possesses only dark-edged nerve-fibres in its sympathetic. But Remak, Valentin and myself found, in addition to these, pale, marrowless fibres are also present, though the number, importance and route of the latter have not been adequately studied and consequently cannot be further discussed at the present time.

It is far more important to determine whether and in what number are to be found in the sympathetic of mammals and human beings, first, the marrowless nerve-fibres of Remak, and second, the medullary, dark-edged nerve-fibres originating in its ganglia. Bidder, Volkmann and I have been unable to probe this question deeper, inasmuch as the nervous character of Remak's fibres has been established only recently, comparatively speaking; hence the former assumption that all nerve-fibres of the sympathetic were dark-edged. Now, *per contra*, must be considered the question whether the sympathetic of higher creatures possesses at all peculiar medullary fibres; and here may first be mentioned the ciliary ganglion of the cat. Bidder and Volkmann found that in this ganglion the extravasating ciliary nerves are much thicker than the roots proceeding from the *oculo-motorius*, and consist almost exclusively of fine, dark-edged fibres; and this observation I was able to confirm in 1844, when I further showed that these ciliary nerves indeed contain Remak's fibres, but in very small number. These observations established the fact that in mammals, as well as in frogs, sympathetic ganglia send forth dark-edged nerve-fibres. The ciliary ganglion is counted among the sympathetic, in accordance with the character of its nerve-cells, which, as Retzius demonstrated, are all multipolar.*

Pondering further over these relations, we come to the difficult question of the relations of the marrowless or Remak fibres and the dark-edged fibres to the ganglionic cells of the sympathetic. Does the sympathetic contain fibres that are marrowless throughout their length from origin in the cell to final termination, or are all the sympathetic fibres (and that some of them are, we know) marrow-bearing in certain sections of their length? Recent investigations lead me to the following conclusions:

The fibres proceeding from the cells of the sympathetic ganglia of the mammalia, become marrow-bearing a short distance from their source in many cases; their form becomes that of fine, dark-edged fibres which, as in the frog, are distinguished from even the finest fibres of the trunks of the cerebro-spinal nerves by their brief diameter:

These sympathetic fibres in certain nerves remain marrow-bearing until they almost reach their terminations; witness the *ramuli ciliaris* emanating from the sympathetic ophthalmic ganglion—the nerves which attend on the *arrectores pilorum* of the cat—the many nerve-fibres emanating from the borders of the sympathetic:

On the other hand, in many cases, the medullary sympathetic fibres as they proceed become changed into marrowless or Remak fibres; this is especially the case with the nerves of the intestine, of the liver, and in part also of the spleen:

Finally, there are numerous cases in which fibres emanate marrowless from the sympathetic cells, and so remain throughout their course, as is found, above all, in the fibres of the ganglionic plexus of the intestinal wall and in many other peripheric ganglia.

So much with respect to the general relations of the ganglionic nervous system. With regard now to its finest structure and equipment, I would first emphasize the assertion made by me years ago, that this portion of the nervous system depends in part on the brain and spinal cord, and in part possesses a peculiar independence by virtue of its numerous ganglia and the nerve-fibres which emanate therefrom. In the latter respect, the most important experiments are those of Bidder, who in 1844 showed that, in the frog, after total destruction of the spinal cord alone or of the cord and brain together

* That in mammals as well, sympathetic nerve-cells send forth dark-edged fibres, was shown by me in 1844 in connection with the *ganglion thoracicum* IV of the cat.

—but sparing the medulla oblongata on account of the movements of respiration,—the heart-beat, circulation, movements of the intestinal canal, digestion, and secretions, might proceed for days, and even weeks, almost as well as under normal conditions; further, we all know that when the entire heart is cut out, regular pulsations long continue, and when it is cut up, some parts are quiescent while others reveal movement.

Volkmann showed that after he had separated the auricles and chambers of a frog's heart by a cross-section, the vestibules alone continued to pulsate; the chambers did not pulsate. And I showed that when a frog's heart is cut into small pieces, only those continue to pulsate which emanate from the point where chamber and vestibule are united; and at that time I inferred that the organs which condition the movement of the heart have their seat at this point—this long before the exact location of the cardiac ganglia was established by Ludwig, Bidder, Rosenberg, and others.

Turning now to the finest structure of the sympathetic ganglia, the great fact is observed that, as in the spinal cord and brain, all the sympathetic ganglionic cells possess but one continuation, which is prolonged in a genuine nerve-fibre. With respect to these origins: the sympathetic cells are unipolar and send out only one offshoot—this has long been known of amphibiæ; here belong the ganglionic cells with spiral fibres which were so long shrouded in mystery and were finally discovered by Beale and Arnold. Since the investigations of Retzius, these cells are considered as follows: The spiral fibres are regarded as the ends of dark-edged fibres, issuing from the centre, surrounding the body of the ganglionic cell with terminal, anastomosed ramifications, while the cell itself sends forth a straight continuation. The presence of such unipolar sympathetic ganglionic cells has been established not only in the frog and toad, but also in the tritones and lizards. Most probably they also occur in certain ganglia of the mammalia, among which may now be mentioned, according to the researches of Bidder, the submaxillary ganglion of the dog, and, according to Aronson and Retzius, also the sympathetic cells of the rabbit. With respect to the behavior of the spiral fibres and the straight fibres of these cells, the recent past has made great headway in its investigations of the ganglionic cells of the frog heart, and the following discoveries are worth enumerating:

The spiral fibres are often forked (Retzius, Smirnow):

They may also give forth branches which join the muscular fibres of the heart (Smirnow):

The straight fibres also reveal divisions, as Schwalbe first observed, and were followed by Arnstein up to the fibres of the heart muscle:

The last-named author also observed in the cardiac ganglia bipolar cells, one of whose fibres proceeded toward the centre, while the other joined the muscles.

From these facts the following conclusions may be deduced:

Apart from their peculiar course the spiral fibres behave like other nerve-fibres which penetrate the ganglia, and they end, like the latter, with terminal plexuses or so-called baskets or interlacings about the nerve-cells; these interlacings and the spiral fibre on the one hand, the cell and the straight fibre on the other, are accordingly separate, independent formations:

A number of the spiral fibres may issue from one stem fibre—as is also the case with other, centrifugally acting, cerebro-spinal and sympathetic fibres which enter the ganglia of the sympathetic:

The straight fibres are not to be compared with dendritae or protoplasmic elongations; they are simply elongations of the axis-cylinders of the cells in question, which unite with muscular fibres and thus give rise to intertwinings:

Peculiar, and perhaps true only of the heart, is the fact that the spiral fibres not only form fibre-baskets (interlacing anastomoses) with certain branches (collaterals), but in common with other branches possess termini in the muscles:

The peculiar spiral course of the fibres in question may be explained, as was intimated by Retzius, from their development; manifestly they were sent forth from more central cells, and gradually join the ganglionic cells in question; during this process, according to the obstructions encountered by their growth, a straight or a spiral course is selected.

Besides these unipolar cells, we find predominating or even exclusively present in the sympathetic of all the higher animals, especially the mammalia, multipolar cells provided with many elongations. One of these elongations, however, is transformed into a genuine medullary or marrowless nerve-fibre which issues from the ganglion in question and proceeds farther peripherally; whereas the numerous other elongations in closest proximity to the cell exhibit a greater or less profusion of branches, and with delicate free endings continue on their way between the neighboring nerve-cells.

Let here be mentioned a number of unusual or not accurately recognized relations of the nerve-cells of the sympathetic: Among the former I count the anastomoses of the nerve-cells, observed by Arnstein in the ganglia of the frog heart, by Ramon in Auerbach's plexus of the frog, and by myself in Meissner's plexus of mammals. In these cases we surely have to deal with nerve-cells, and I have sought to illumine the dependent cells by tracing the history of their formation, explaining them as elements whose separation did not proceed to the end. A series of other anastomosic cells—such as those described by Drasch, Fusari and Panasci in the organs of taste, by Ramon and others in the intestinal villi and in the pancreas — are assuredly, on the contrary, simply connective-substance cells and are not nervous elements. Secondly, I call attention to the nerve-cells in the intestinal plexuses, whose peculiar form has been emphasized by Ramon alone, and with reason. The greater number of these cells, although multipolar, seem to have but one kind of offshoots, and all of the latter seem to be nervous. My own experiments tend to support this assumption. Accordingly in both cases —with the unipolar and with the multipolar cells—we find originating in the sympathetic nerve nodes nerve-fibres which may well be termed sympathetic in this respect; and these nodes are to be regarded as points of origin for nerve-fibres whose number is quite colossal, in view of the millions of cells in the total domain of the sympathetic.

Now, what becomes of these sympathetic nerve fibres in their further course? The members of the one class, after a longer or shorter course, pass directly to the involuntary muscles, while another group of the same fibres find their terminal expansion in nearer or remoter sympathetic ganglia. To the former fibres, which may be termed the directly motoric, belong, first, all fibres which proceed from the ganglia which are mostly peripheric—for example, those proceeding from the heart ganglia, the ganglia of the muscular wall of the intestine, the microscopic ganglia of the lungs, the sympathetic ganglia of the cerebral nerves, the optic, nasal, auditory, and submaxillary gangliæ. On the other hand we have, proceeding from the great ganglia of the sympathetic nerve chain, such fibres as reach their terminal expansion without intersecting other ganglia. The most striking examples of the latter kind are the fibres which attend the *arrectores pilorum* of the cat (muscles which cause the hair of the back to stand) and which originate in the sympathetic nerve ganglia.

I term "indirectly motoric, sympathetic fibres" all nerve-fibres originating in the sympathetic ganglia, ending in other similar ganglia, and acting centrifugally. These elements have also been but recently demonstrated with the aid of new methods; and thus far only Ramon, Gehuchten, Lenhossek Jr., Sala and myself have seen and drawn such elements. These experiments revealed that there are in the sympathetic nerve ganglia and in the peripheric ganglia of the intestinal wall, fibres originating in other sympathetic ganglia, developing between the ganglionic cells more or less abundant ramifications, and at least in certain cases entering into peculiar relations (with their termini) to the individual cells about which they form interlaced network. Manifestly these termini are to be regarded as the means by which cells of the various ganglia are capable of influencing one another, or, in other words, of transmitting motoric impulses from one ganglion to another; moreover, in exerting this influence there are surely brought into play as well the numerous ramified short elongations of the ganglionic cells—the dendrites of the latter,—in such manner that the penetrating nerve-fibres are capable, by means of this contrivance, of arousing not only a few but even a great number of cells. Further, on the fibres

which simply pass through the ganglia, collaterals have been observed to which the same action must be ascribed as to the last termini of fibres. All in all, the total sympathetic nervous system, excluding the sensory elements, appears to be a motoric system of countless nerve unities or nerve treelets, widely ramified and in part interacting. Thus we may readily comprehend how far-reaching effects may under certain circumstances be obtained from a few limited places of attack.

For the complete exposition of the anatomical and physiological relations of the sympathetic nervous system, a number of details are yet to be discussed: first of all, its relations to the rest of the nervous system:

How is to be explained the fact that we possess very indefinite theories respecting the conditions and the processes in the parts served by the sympathetic; and how, on the other hand, can be explained the mighty influence wrought by the states of the mind, emotions of every kind, excitation of the spinal cord, on the function of the heart or the state of the vessels? Fear and anxiety pale the cheek by contracting the vessels, effect profuse diaphoresis, contract the *arrectores pilorum* (the so-called goose-skin); whereas other emotions, by relaxing the vascular muscles, produce suffusion of the skin or an abundant secretion of tears, to say nothing of certain conditions of the sexual sphere.

Looking more closely at these relations, and turning first to the domain of sensation, we find that all the parts served by the sympathetic give rise normally to none but vague sensations, for we have no perception of the mechanical irritation applied to the internal walls of the stomach, of the intestine, of the bladder; in these parts, further, we have scarcely a trace of the sensation of locality, no consciousness of cold or warmth or of substances exerting chemical action. On the other hand we receive vaguer or sharper sensations of fullness in the stomach and of the contents of the lower bowel and bladder. Congestion of the spleen causes the well known splenic pricking or sticking. Contractions of the uterus manifest themselves in the form of pains; the lungs may send forth sensations of oppression and dyspnœa; and in morbid conditions, in inflammations —when great pressure is exerted by calculi— violent pain may be felt throughout the region served by the sympathetic.

All these phenomena I ascribe to a small number of dark-edged nerve-fibres which pass from the sensory roots of the spinal-cord nerves, through the connective branches, into the sympathetic, ramifying with special profusion in the intestines. Of these nerve-fibres the best examples are those occurring in Pacini's tactile or sensory corpuscles of the mesentery in man and in the cat. Dark-edged, coarser fibres are also contained in the nerves of the liver, spleen, kidneys, intestine, supra-renal capsule, uterus, bladder, etc., and penetrate these organs, as has been shown of the intestine by Auerbach and J. Kollmann. According to my observations, the great majority of these sensory fibres make their way through the sphere of the so-called intestinal nerves or splanchnics; proceed, without forming connections with sympathetic ganglionic cells, through the large cœliac ganglion and through the adjacent ganglionic masses, passing thence to the nerve plexuses of the spleen, intestine, liver, kidneys, etc.; thence they proceed into the various organs, surrounded in their course by countless Remak's fibres and a certain number of fine, marrow-bearing sympathetic fibres exhibiting a coarser diameter. In the various organs, as in the Pacini corpuscles, the sensory fibres probably terminate pale, marrowless and free—having first, however, suffered frequent division, as I first observed in the splenic nerves.

It should specially be borne in mind that these sensory fibres, proceeding from the cerebro-spinal nerves, according to my observations, are much more numerous in certain organs than in others—for example, in the kidney and supra-renal capsule of the cat and rabbit, while of the liver and intestine of these animals the reverse is true; and that, according to the latest observations of Langley, certain of these fibres—those occurring in the gray *rami communicantes*—yield no reflexes when irritated, like the depressor nerve of the heart; whence, however, it must not be concluded that these elements exert no centripetal action.

It is more difficult to explain the influence

of the brain and spinal cord on the phenomena of movement in the domain of the sympathetic, but even here definite facts are at our command. The fact must be emphasized that this influence is partly direct and partly indirect. I term indirect the intervention of the central organs when the latter, acted on by external stimuli, effect contraction or relaxation of the involuntary muscular systems —for example, those manifold phenomena of movement which follow the application of stimuli to the external skin or to the mucous membrane, and which manifest themselves in the contractions of vessels, in the flow of secretions (tears, saliva, gastric juice, intestinal juices), in the relaxation and contraction of the smooth muscles, erection of the nipple, penile erection, contraction of the *tunica dartos*, etc. These movements are termed reflex between the domain of the sympathetic and the cerebro-spinal nerves; opposite to them in character are the direct influences, such as induce contraction and relaxation of the vessels due to varying emotions—such, for example, as are manifested in the pallor of the cheek, in blushing, in the increased or diminished number of heart-pulsations, in diaphoresis, and in the increased flow of tears. Of all these conditions, that most carefully investigated is the one which is least pronounced in the human, viz., the contraction on the *arrectores pilorum* or pilo-motors. Langley has reported careful observations upon the cat,* and shows that the nerve-fibres which act on the *arrectores pilorum* issue from anterior roots of the spinal cord, proceed to the ganglia of the sympathetic through the *rami communicantes*, thence to the dorsal branches of the spinal-cord nerves, and with these to the *arrectores pilorum*.

Elevation of the dorsal hair may be effected experimentally by irritating the lateral column of the spinal cord, by irritating the anterior roots of the spinal-cord nerves, and by application of electricity to the dorsal branches of these nerves. But Langley went farther and showed that this course is not a continuous one, for on poisoning a cat with nicotine the dorsal branches alone remained excitable; and as nicotine paralyzes the gray nerve substance, Langley supposes that the nerves of the pilo-motors are connected somewhere in their course with the ganglionic cells of the sympathetic. With respect to the mode of this connection, as the result of a number of new observations I formulated the hypothesis that the nerve-fibres of the pilo-motors are sympathetic fibres emanating from the ganglionic cells of the sympathetic ganglia, and that certain elements of the motoric roots act on the nerve-fibres of the pilo-motors by ramifying with terminal branches about the primitive cells in the sympathetic ganglia. Apart from the physiological facts ascertained by Langley, and apart from what has just been stated respecting the origin of the nerve-fibres in the sympathetic ganglionic cells, this hypothesis is further based substantially on an observation of Ramon's, who saw fine nerve-fibres of the motoric roots of the chicken penetrating into a cervical ganglion of the sympathetic, ending therein with fine offshoots winding about the cells. This observation was later confirmed by Lenhossek.

If these deductions are correct, the relations of the central nervous system to many phenomena of movement in the domain of the sympathetic would not be altogether direct, but rather appear in the light of transmissions from one domain to another; and in view of the great importance of this matter it is well to inquire whether other facts, apart from those taken from the *arrectores pilorum*, support such an assumption. And in truth we have yet more of such facts, as, above all, the relations of the *oculo-motorius* to the ophthalmic ganglion and the internal muscles of the eye, and then, further, the relations of the sympathetic of the throat to the *dilatator pupillæ* and to the smooth external muscles of the eye.

With respect, first, to the nerves of the ophthalmic muscles and to the ophthalmic nodes, strange as it may seem, most anatomists and physiologists still assume a direct action of these nerves on the sphincter of the *pupillæ;* and yet the fact this muscle is smooth and involuntary should have sufficed to arouse objections to this assumption, since no other instance is known among vertebrates wherein motoric cerebro-spinal nerves

* Heinrich Mueller was the first to discover a movement of certain hairs at the auditory meatus when irritating the sympathetic of the neck, also the smooth muscles of these hairs.

directly innervate smooth muscles. Only Langendorff, Langley, and Anderson have hit upon the idea that the ophthalmic ganglion plays a chief rôle in the movements of the iris; and this, I am satisfied, is correct. According to all that we know thus far, we must assume that the "*nervuli ciliares breves*" originate in the *ganglion ciliare*, and that the fibres of the *radix motoria* proceed from the *oculo-motorius* into the ganglion, ramifying terminally about the cells in the same manner as the pilo-motoric fibres of the spinal-cord nerves in the sympathetic ganglia of the sympathetic. The fundamental facts are as follows:

In the cat, as Bidder and Volkmann have shown, the issuing branches of the *ganglion ciliare* are by far richer in nerve-fibres than the entering branches, and contain only fine, dark-edged fibres:

In nicotine intoxications (Langley and Anderson) and after hæmorrhages (Langendorff) the trunk of the *oculo-motorius* ceases to exert action on the pupil, whereas the *nervuli ciliares* retain their full influence, which must be imputed to the death of the nerve-cells in the ganglion:

The ophthalmic ganglion (*ganglion ciliare*) is a sympathetic ganglion with multipolar cells (Retzius, Michel, and myself):

In the ophthalmic ganglion the cells are surrounded by unusually large numbers of dark-edged fine fibres of the motoric root, in which Retzius perceived divisions—in favorable cases (young animals) these divisions are displayed in Golgi's preparations, in the form of neat interlacings and anastomoses spun round the cells (Michel and myself):

The *nervuli ciliares* consist substantially of dark-edged fine fibres, and from all appearances Remak's fibres are to be found only at the fibre-origins of the cells. We may accordingly regard as perfectly sound the hypothesis that in this ganglion one oculomotoric fibre with its branching ends is spun about and stimulates many ganglionic cells; through these cells, then through the ganglionic fibres, the ophthalmic muscles are influenced.

The relations of the nerve-fibres of the sympathetic of the throat, which act on the *dilatator pupillæ* and on the smooth muscles of the eyelids and the orbits, to the supreme cervical ganglion and to the internal carotid plexus emanating from the former, are, according to the experiments of Langley, Dickinson, and Langendorff, precisely the same as between the *oculo-motorius*, the ophthalmic ganglion, and the *nervuli ciliares;* and these observations only support the contention advanced above.

In the same manner as in the cases just considered, must likewise be explained the action of the brain and spinal cord on the nerves of the vessels and the smooth muscular system of the intestines. Here as well, it is to be assumed that certain fibres of the cerebral and spinal-cord nerves, which run to the sympathetic ganglia, there end while surrounding its cells with fine offshoots, and do not exert a direct action, but act only through the cells stimulated by them and through their offshoots, on the vascular and intestinal muscles. We would accordingly have in the domain of the sympathetic, if this assumption be correct, cerebro-spinal motoric elements of the first class and sympathetic motoric elements of second class. With the vascular and intestinal nerves, the most important points of origin of the sympathetic motoric fibres are: The cœliac ganglion or abdominal brain at the origin-point of the great intestinal arteries, with its ganglionic offshoots along the aorta into the pelvis, from which places all vessels of the lower abdomen and the pelvic organs, and the latter themselves, are innervated; furthermore, the ganglia of the sympathetic, especially the throat and lumbar ganglia, are origin-points of the motoric nerves for blood-vessels of the throat, head, abdomen, and extremities. And with respect to the cerebro-spinal motoric elements of first order in this sphere, their course is chiefly in the domain of the intestinal nerves or splanchnics, also in the branches connecting the upper breast and lumbar nerves with the sympathetic, as is shown especially by the beautiful experiments of Langley. Though I am of the opinion that all vascular nerves are derived directly from sympathetic ganglia, I cannot omit to add that several authors trace the vascular nerves directly in the spinal cord, as a result of experiments which I do not consider dubious. How far the vagus (which, with its profusion of terminal branches, first

enters the semilunar ganglia, thence passing into the liver, spleen, kidneys, and supra-renal capsules, thence into the pancreas and intestine) owes its influence over the contractions of the vessels of these parts and of the intestinal wall to the admixed sympathetic fibres (which join the vagus from the *ganglion cervicale supremum* and *infimum*), or from its origin bears motoric fibres for smooth muscles, may not yet be decided.

With respect to the relations of the higher central organs to the cerebro-spinal motoric elements of the sympathetic, or to those of first rank, all observers are unanimous in declaring that a chief centre of the vaso-motors is seated in the medulla oblongata at the base of the fourth ventricle, but also that the spinal cord is in part to be regarded as such a centre. It is shown that on destroying a definite portion of the elongated cord, vascular enlargement ensues in almost all parts of the body; on the other hand, when the same portion is irritated, comprehensive vascular contraction is the result. Further, it is only when maintaining this vascular centre that the above-mentioned modifications in the diameters of the vessels occur; such modifications result from previous irritation of the sensory nerves and may be termed vaso-motoric reflex phenomena. That the cerebrum exerts an influence on the smooth muscular systems, especially of the vessels, is evident from the consequences of emotion, and is confirmed by experiments on animals.

(*To be continued.*)

SOME DIAGNOSTIC POINTS IN SKIN DISEASES.

BY I. N. BLOOM, M.D.

In the diagnosis of skin maladies—more perhaps than in any other class of diseases—observation is a paramount necessity, yet it seems to be but meagrely utilized. I can perhaps better illustrate that which I desire to emphasize by pointing out some of the mistakes usually made.

Last February a year ago a gentleman came to me stating that his daughter had been attacked with a "breaking out" which itched considerably; following her his wife, then himself, and afterward his wife's mother, were similarly affected. They were very prominent people; had been treated for six months by a physician—not a specialist, but who claims to be "well up" in skin troubles. In questioning this physician as to whether or not it was contagious, he assured them it was not—that it was simply eczema, or "tetter," and that as all were living the same life and eating the same food they were equally liable to the disease. He had treated this family, as I have said, for six months, or, more accurately, from August until the following February, when I saw them.

I stripped the patient and found a well marked eruption—"between the nipples and knees"—and other characteristic symptoms, and made the statement to him that I thought I could cure him in a week. He of course thought it impossible. It was an undoubted case of itch. His wife came to me the following day, and when I made my diagnosis she said she did not believe it possible, as she had always understood itch was a filth disease: she did not see how they could have it, as their habits were the most cleanly, and furthermore it was impossible because their daughter was the first to be affected and there was no chance of her having taken the disease. I suggested theory after theory, but for a long time nothing tangible could be elicited. Finally she recalled the fact that her daughter had slept away from home on one occasion only, for one night, in the July previous to the appearance of the eruption, and on consulting my case-record I found that at that time I had treated for itch two children of the family her daughter had visited—showing plainly the origin of the trouble.

Some five or six years ago a gentleman consulted me who had had itch for a year. He had been treated by a prominent physician, whom we all admire, for syphilis.

Another gentleman, whose physician was a well known practitioner, had three members of his family suffering from secondary eczema, and this condition was entirely produced on a sensitive skin from excessive scratching. These were also cases of itch; they had been receiving treatment for six months.

Of course there is no disease so easy to treat and to cure as the itch. Now it does seem to me that in a profession in which the

power of observation and attention to detail is more necessary than in any other profession, it is strange how little is exercised in the treatment of skin troubles.

Recently was referred to me from the country a case of scleroderma in a child about nine years of age. There was a white plaque on the left shoulder two inches by four inches in extent, adherent, perfectly white, and (what is characteristic of most cases of scleroderma in the advanced stages) almost complete atrophy of portions underneath the epidermis, with partial atrophy of the epidermal layers, giving a peculiar parchment-like appearance; the edges showed the capillary engorgement which is, at times, characteristic. This case had been diagnosed as vitiligo, which, as all know, is absolutely nothing but absorption of the pigment of the epidermis. This case, taken in connection with others, led me to believe that the powers of observation in physicians seem to be wanting when applied to skin diseases in general. Such diagnoses can be made without asking a question of the patient, and the difference between them is made on apparently small points, and yet the difference is of the greatest. The difference, for instance, between a primary eczema and a secondary eczema as a result of pruritus is very great, and very grave as far as treatment is concerned, and yet it seems to me that the general practitioner usually overlooks it. I think I can say that the easiest disease to diagnose is itch, and that the greatest number of mistakes made in general practice occur in the diagnosis of this malady. This is in part due to the fact that the family physician is unwilling to believe his patient can possibly have it, as in the cases mentioned, and that it is a reflection upon the person who has the disease to tell him or her that the trouble is itch.

I think the next most frequent mistake in general practice is from pruritus, pure and simple. I know that pruritus is not supposed to be a diagnosis, but in reality pruritus *is* a diagnosis, and the eczema which is secondary to it is of very frequent occurrence. Whether it be pruritus hiemalis, the winter pruritus of Duhring, or whether it be pruritus universalis, it is a common disease and one that we see very generally, and we are apt to confound the results of the disease with the disease itself.

A skin disease that is very generally recognized by the general practitioner is psoriasis, and yet it is strange in these cases where the first psoric attack occurs some time after puberty, what different diagnoses are made. Of course, the diagnostic point of psoriasis is the sharply circumscribed efflorescence and, whether it be the size of a pin-head or as large as the hand, its pearl-like covering; and a point that is made for students which the general practitioner would do well to notice is the dropping off of the pearl-like scales, and the punctate bleeding. This disease is often so well marked that it could not possibly be mistaken for any other; and yet I have had people come to me and after the diagnosis had been made express a doubt as to its correctness, from the fact that Smith, Jones and Brown had made three different diagnoses, and mine being the fourth they did not know which to believe.

The disease that is most commonly mistaken and that answers a universal purpose in diagnosis is syphilis; and it does seem to me that when the general practitioner is in doubt about a certain trouble, he jumps at the conclusion that it is specific. I do not know of any more serious or more common error. Syphilis, of course, to the public is a very serious thing. Most men are liable thereto, and when the diagnosis is made, often a great deal of damage or unhappiness is caused. I think, too, that most practitioners forget that skin syphilides are exceedingly rare after a year from the date of infection; if this were kept in mind, such diagnoses would be much more rare. Another point as regards skin infection is that after a year a general syphilide is rare. Skin syphilide does occur after six months, but it is usually of a very discrete form. There may be a patch of skin syphilis after six months, but that patch can with few exceptions be covered by the hand; we do not get a syphilide that extends over the body. Bearing this in mind and remembering the history of the case, it will be impossible to mistake the eruption—as a gentleman did who treated his patient for syphilis when he had itch. Again, there is the history of the family, as in the case above reported, where four mem-

bers—father, mother, daughter, and mother's mother—had had the disease. Had the physician simply stripped any one of them, it would have been readily apparent what the trouble was. Another mistake in the diagnosis of itch, which the gentleman in question perhaps made, is, looking on the hands for evidence. This is a serious error, because in those who are cleanly, of good habits, and use soap three or four times a day, there are no hand symptoms; in such the main diagnostic point is the appearance of the eruption between the nipples and the knees, and especially the presence in people of sedentary habits of an eruption on the buttocks with excessive itching, increased by the warmth of the bed-clothing at night, and, in the male, the appearance of the itch mite on the penis. I regard two or three papules or pustules on the penis as of much more importance in those who are in the better walks of life, than the appearance between the fingers and on the ball of the thumb in the lowly.

I think, in the diagnosis of skin diseases, attention should be given to the particular sites, instead of crowding things together. It has been my experience that the general practitioner gives one glance at the outbreak, and his conclusion is formed. If questioned concerning the eruption, he does not know whether it is papular, pustular, squamous, or macular. The outbreak makes a deep impression upon him, and if pressed as to why he makes his particular diagnosis he cannot tell you; he will simply say, "It is my general impression."

To sum up: The diagnosis of skin diseases should be based upon the most minute observation, and no diagnosis should be made unless we have a sufficiency of reasons for making that particular diagnosis, the same as would obtain in pneumonia, typhoid fever, etc.

Louisville, Ky.

DIRECT FIXATION IN FRACTURES.*

BY B. MERRILL RICKETTS, M.D.

A subject that seems of paramount interest is direct fixation in subcutaneous fractures, compound fractures, and ununited fractures. The great length of time required for union of bone, together with the general impairment of health which so often results therefrom, and the various unfavorable sequels such as shortening, rotation, etc., have been obstacles over which many have stumbled. The bone ligature of Dallinger, the ivory cylinders and clamps of Valkman, Heine, Bircher and Socin, metallic spikes and screws of Nealgaigue, ivory pegs of Riedinger and Aufrecht, and the many modes of suturing by wire, etc., while they have not settled the question, have added much toward its solution.

A series of experiments carried on by myself four years ago, convinced me that direct fixation is a rational procedure, and that sooner or later it will be the means adopted in the treatment of at least a certain class of fractures, especially those of long bones. The three questions propounded at that time were: How and when may bones be restored? Should fragments of bones be permanently removed, except in case of amputation? Should not exploratory incision be made when doubts exist as to the character of the fracture?

The only suggestions pertinent to this subject that I have seen were contained in a paper read before the American Surgical Association, May 30th, 1893, by Nicholas Senn, who, it seems to me, offers the most rational means of dealing with this class of injuries that has thus far been presented, since it is simple, convenient, efficacious, and, if done aseptically, offers all that can be asked; even though the wound should be infected before or after the operation, substantial bony union will result with perfect coaptation of the fragments.

Things to be kept from between the fragments are: Nerves; arteries; veins; clots; bone spiculæ; muscular tissue; periosteum; ligaments; tendons; fasciæ; and foreign bodies. Things to be avoided are: Non-union; rotation; infection; pain; shortening; paralysis; angular deformity; overriding of fragments; injury to adjacent joints; and exuberant callus. The great thing to be brought about is a normal condition, and this can be accomplished in only a small per cent. of cases under generally accepted modes of

*Read before the Ohio Association of Railway Surgeons.

treatment. If the surgeon is successful in avoiding certain conditions and in keeping the various things from between the fragments, a perfect result will surely follow.

Now what are the means most likely to bring about such a result?

Doctor Senn offered a plan purely mechanical, and that seems original, at least so far as its application to surgery is concerned. If this measure overcomes the objectionable features of present methods, it will largely deliver the profession from the annoying malpractice suits that are now only too common.

Doctor Senn reports three cases, two of ununited and one of compound fracture, treated by him with bone rings; also having operated upon two dogs, in each of which perfect coaptation resulted without the ferrule being removed.—They were, however, removed in the cases of the men.

It is not necessary to remove the rings, as they will be absorbed, providing the wound does not become infected; and should the latter unfortunate sequel obtain, the rings will act merely as foreign bodies and need not be removed until complete union has taken place. They will prevent lateral and longitudinal displacement, and the addition of a plaster-of-paris splint will inhibit rotation. They are made from the corresponding bone of the ox; thus a ring from the femur of the ox will slip over the same bone in man, one from the tibia over the tibia, etc., etc. Such should be from one-half to one inch wide and one-quarter of an inch thick, made from fresh bone and cut and filed to proper shape.—If more than one-half inch wide a dozen or more small perforations should be made in its wall. It should also be thoroughly boiled, cleaned, and subsequently preserved in alcohol. Also great care must be exercised that it be not broken during adjustment or while applying the plaster-of-paris splint, which latter should be fenestrated and encase the entire extremity.

Doctor J. Bauer* has treated the subject of fractured femur in a very happy, novel, and instructive manner; and he propounded the following questions to Doctors Senn, Griffith, Roswell Park, Morton, Marcy, Briggs, and myself; the only answers given were by Doctor Senn and myself, as we alone advocated direct fixation:

1. What position of the extremity do you favor in oblique fractures of the shaft, and what reasons actuate your practice in preferring it to others?

"Straight position where shaft is broken, double inclined plane when fracture is near joints."—(*Senn.*)
"Natural eversion."—(*Ricketts.*)

2. By what plan do you treat the like fractures, and what do you consider its advantages over and above others?

"Extension by weight and pulley in simple, direct fixation in compound fractures."—(*Senn.*)
"Sand-bags, pulleys and weights."—(*Ricketts.*)

3. To what cause or causes do you ascribe the shortening of the femur?

"Muscular contraction."—(*Senn.*) "Muscular contraction."—(*Ricketts.*)

4. (*a*) Is the shortening due to the overlapping of the fragments of the broken bones? If so, does the overlapping come from the lower or upper fragments or both? (*b*) Or does the shortening originate by the softening of the fragments and the pressure of one upon the other?

"(*a*) Yes, from lower. (*b*) No."—(*Senn.*) "(*a*) Yes, lower fragments. (*b*) No."—(*Ricketts.*)

5. Are there any means, and what are they, to diminish or avert shortening altogether?

"Direct fixation by rings."—(*Senn.*)

6. What provokes muscular reflex action in fractures, and by what measures can it be arrested or prevented?

"Loss of support."—(*Ricketts.*)

7. Do oblique fractures in other parts of the skeleton, as a rule, heal with shortening; and if not, what prevents it elsewhere?

"Sometimes, but seldom."—(*Senn.*) "Yes, fractured humerus or any single bone, unless fractured transversely and perfectly coapted."—(*Ricketts.*)

8. Is not the formation of massive callus an evidence of imperfect apposition of the fractured bone, and *vice versa?*

"Yes."—(*Senn.*) "Not necessarily."—(*Ricketts.*)

9. As a rule, is not pain at the point of fracture and its surroundings good evidence of imperfect apposition of the bone fragments, and the correction of the latter the most effectual remedy?

"Yes."—(*Senn.*) "Pain may be due to a nerve, large or small, being caught between the fragments, or the pain may be due to pressure of the callus mass upon the adjacent tissues or externally. Let us do away with shortening and malpractice suits."—(*Ricketts.*)

It will be observed that I did not reply to the fifth query; instead, I sent a copy of my original paper, from which I expected Doctor Bauer to quote, hence really answered the same as Doctor Senn. At the same time I was somewhat in doubt as to just how direct

**Medical Era*, November, 1893.

fixation should be secured, giving preference to silver wire until something better was offered.

Doctor Senn answered the eighth query in the affirmative, while my reply was a negative; and I do not believe the formation of massive callus is an evidence of imperfect apposition of the fractured bone entirely.

With the foregoing exceptions it will be seen our answers are alike, a fact that is the more interesting in that neither knew the views of the other until after they were published.

The femur, being the most frequently fractured and the most difficult to manage, from a legal point of view is the most important of all the bones to the surgeon.

Finally, if the laity expect perfect results from our profession, they must be equally willing to assume the responsibility attending the necessary surgical procedure. If they wish to avoid the things to be avoided, the surgeon must be allowed to do the things that will enable him to avoid the things to be avoided.

Cincinnati, Ohio.

IMPROVEMENTS IN ABDOMINAL SURGERY.*

BY HAL C. WYMAN, M.S., M.D.

Twenty years ago the term "abdominal surgery" practically meant the removal of ovarian cysts, and this was surrounded by so many exceptions that the surgeon generally frittered away his time in searching for them, instead of operating. Unless a cyst was freely movable and free from adhesions, he was a bold man indeed who would operate.

It is quite otherwise now. All sorts of cysts of ovary, broad ligament, uterus, Fallopian tubes, mesentery, kidney, spleen, pancreas, and liver, come within the legitimate scope of abdominal surgery. Obstructive diseases, wounds and perforations of the intestines and their appendages, tumors of all sorts which interfere or threaten to interfere with the functions of any of the organs within the abdomen, are embraced in the surgery of the abdomen and treated with constantly improving success.

*Read before the Wayne County, Michigan, Medical Society.

Some writers have shown by statistics the number of years added to the average of human life by the advances that have been made in abdominal surgery. Ovariotomy has often been treated in this way, and I presume the removal of fibromata and appendicitis will be in the near future. But statistics and the diagrammatic use of numerals have a purely figurative relation to the results of surgery, and must be comprehended in all their aspects to be correctly interpreted. It is better for the abdominal surgeon to avoid this juggling and devote himself to developing his diagnosing powers and improving his technique. Without doubt, our greatest advances have been due to more thorough diagnosis, which has suggested and made evident the plan of treatment that should be followed. We are in need of better methods for determining the character of changes taking place in the abdomen when its contents are diseased, that there may be earlier recognition of whether a lesion will or will not require an operation to save the patient's life. Percussion, auscultation, palpation are not sufficiently refined to answer the purpose in all cases, nor are history, temperature, degree and character of pain sufficient every time. Bi-manual touch, the patient being in some cases anæsthetized, has proven in the hands of some skillful surgeons a most efficient aid in securing the desired information. But we must not think no improvements can be made. The day will come when the surgeon will know much more about the contents of the abdomen than he does at present.

The determination of the exact location of inflammatory and purulent foci and areas within the peritoneal cavity, without invading the sound portion of it, helps materially in solving the problem of what to do with the diseased parts. One should always be sure to know what really menaces the life of his patient, and should limit his surgery to removal of the offending structures.

Nothing can be more absurd than the proposition—"Always remove the appendix vermiformis, when it is diseased." It is equally absurd to always insist on removing the entire uterus when it contains a fibroid. Surely, no man who possesses a discriminating sense of the dangers he exposes his pa-

tient to in performing these operations will remove more of these organs than threaten the life and comfort of his patient. It is bad surgery to thrust an exploring finger or hand into a healthy peritoneum in search of a perforated or purulent appendix vermiformis, when that organ can be reached and deprived of its pus or perforations without such disturbance. It is bad surgery to cut through abdominal muscles at right angles to their fibres, when the diseased area can be reached through an opening made by separating fibres with the handle of a scalpel and holding them asunder with two sets of retractors. Both these methods of practice are advancements in technique, just as important as the most approved method of making a pedicle in cases of operation for uterine myomata.

The anatomical relation existing between the parietal peritoneum and the transversalis fascia is so feeble that when an opening is made through to the former, the exploring finger and if necessary the whole hand can be introduced into the space and a search made for the localized inflammatory or purulent accumulation or obstruction, without opening the peritoneal cavity; and when it is found, the incision can be made in a part that will present the least danger of infecting the general peritoneal cavity. I have practiced this method successfully in many cases, and am convinced of its paramount advantages.—With your permission I will designate this procedure "subperitoneal palpation." In forty cases of general and localized peritonitis this enabled me to reach the focus of the disease with a minimum of danger to the patients. Of these forty cases, taken as they occurred, within a radius of two hundred miles from Detroit, but four died, though all were sick in bed in imminent danger of death when the operation was performed. Three years ago I devised a new method of reaching the peritoneum, by separating the abdominal muscles instead of cutting them, over the appendix. I have resorted to it successfully, not only in cases of localized peritonitis due to appendicitis, but in cases of intussusception at the ileo-cæcal valve. Its greatest value is the safety it insures against hernia. I have described the method in detail in papers which have appeared in THE MEDICAL AGE and the Detroit *Emergency Hospital Reports*. I regard these two new methods of diagnosis and treatment as improvements, and base the opinion on results obtained in my practice, but know very well that I am not the one to say whether they will stand the tests of time and trial in the hands of surgeons of more experience in abdominal surgery.

Detroit, Mich.

THE FINALE OF A NOSTRUM PROMOTER.

"Doctor" Henry T. Helmbold, the originator of "Helmbold's Buchu," "Catawba Purgative Pellets," etc.—once the proprietor of the handsomest drug store and most stylish four-in-hand in America—who royally entertained the Shah of Persia at a ball and banquet in Paris at an expense of half a million of dollars, and telegraphed an account thereof to all the leading papers in the United States—who bought up an entire edition of the *New York Herald* on one occasion—whose craze it was to go down to history as the greatest advertiser the world ever saw—died October 24th last, in the State Asylum for the Insane at Trenton, New Jersey, where he had been confined for a number of years.

APPENDICITIS.

Food quotes Swain as saying ninety per cent. of cases recover spontaneously, and that therefore early operative interference is not justifiable. The editor of the *Medical Arena* corroborates and asserts, as the result of personal experience, that every case is amenable to persistent conservative treatment. He would, however, advise an operation when abscess has formed.

Nevertheless the fact remains that too many continue to recommend the knife, and that indiscriminate cutting for pain in the region of the cœcum is the rule rather than the exception.

ECHOES OF THE CRIMEA.

During the Crimean war the hospital entries of the British contingent from wounds numbered 18,300; from disease, 144,400. Those of the French army numbered 116,000 from the first and 320,000 from the second cause.

Correspondence.

VERATRUM VIRIDE IN PUERPERAL ECLAMPSIA.

Editor MEDICAL AGE:

The paper in the current number of the AGE by Doctor J. C. McAllister, on "Puerperal Eclampsia," is timely, practical, and especially valuable.

I have used veratrum viride for relief of above condition, *hypodermatically* and always with success, in the few cases coming under my observation, my attention having been called to the drug by a paper from Doctor J. W. Griggs, of West Point, Georgia, in the *Atlanta Medical and Surgical Journal* for January, 1877. Doctor Griggs employed small doses, two, three, and four drops, and usually associated with one-sixth grain morphine sulphate, claiming originality as to this method of administration, it not having been so used previously to his knowledge.

Doctor McAllister gives no dates as to his or Doctor Rogers' cases, and doubtless this is also "original," as he knows of no other published article on this method.

I write simply to endorse all the Doctor says, and commend this all-powerful and most meritorious remedy, and that others having experience in its use may be led to report for the good of the profession and suffering womankind, attaching no undue importance as to priority or originality in this method, it being evident Doctor McAllister is "original" also, unless—as is not stated—he took the cue from Doctor Rogers.

A medical friend, loved and revered, of this place, now gone to his reward, assured me that aside from its use above discussed, *the place* for veratrum is for *all elevated temperatures* in the lying-in room, and the sheet anchor in puerperal peritonitis, laying stress on its superior powers in the control of inflamed serous membranes, and that it always relieved acute inflammatory action in the female pelvic organs; and so I have often found it to be.

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Since writing the above I find *Therapy* quoting Doctor Ralph Davis in *Virginia Medical Monthly* as having used Norwood's tincture *per orem* for years in condition stated, but lately only hypodermatically; and I find further in October *Medical Brief* Doctor S. W. Horn, Kendrick's Creek, Tennessee, mentions eight drops as his usual dose with the needle, securing good results *always*.

Further research I doubt not would reveal many of the profession thus using it. Still I think I am correct in the opinion that the plan is neither generally known nor largely practiced, and I hope to see the subject enlarged upon.

***

Doctor McAllister's allusion to Doctor Hartman's experience was incidentally overlooked.

Yours very truly,

JNO. G. MCKENNEY.

Monticello, Arkansas.

THE INVERTED RETINAL IMAGE.

Editor MEDICAL AGE:

I have just read Doctor G. A. Harman's article, entitled "The Inverted Retinal Image," in THE MEDICAL AGE of April 25th, 1894. His explanation of erect vision is, that the optic nerve makes a half-turn upon itself, and thus converts the inverted impressions upon the retina into erect impressions upon the brain. As a kind of semi-confirmation of this explanation, he says: "I am informed by the principal of the Shawnee, Ohio, public school that one of his pupils invariably draws everything upside down. His optic nerves are evidently malformed, the fibres running straight back to the brain instead of making the half-spiral turn necessary to erect vision."

The above explanation of the boy's case defeats itself, and, if true, would put the boy in a very sorry plight indeed; for it would make all his drawings stand in just the reverse position to that of the objects drawn and to that of all his other perceptions. For instance, he is requested by his teacher to make a picture of a tree which stands in view before him. His teacher perceives the tree erect, but, according to the explanation, the boy perceives it inverted. Now, when the drawing is finished, and is made upside down, as alleged, the teacher perceives that it is not erect like the tree itself, but is inverted; and, of course, the boy perceives that the drawing is not upside down as the tree itself seems to him to be, but is erect. In other words, when he compares the original and his copy of it, he must perceive just what the teacher perceives, namely, that they stand reversely to each other, one pointing up and the other pointing down. The only way in which he can make them appear to stand alike, is to make the picture stand like the tree itself; and then, if Doctor Harman's explanation is correct, the teacher would perceive them both erect, while the boy would perceive them both inverted. It is evident, therefore, that either the Doctor's explanation is invalid or else the report of the boy's case is erroneous.

The foregoing reminds me of a similar piece of psychological crudity which I read a year or so ago, and which was probably going the rounds of newspapers. It was stated that an Arctic traveler, whose name I have forgotten, had noticed that a certain tribe of Esquimaux, when pictures were given them, always turned them upside down to look at them. The explanation given was, that they really perceived all things inverted like the images of them upon the retina. Then why should they turn pictures upside down if the retina does it for them? If they turned the picture upside down they would defeat the alleged work of the retina, which would then turn them the other way, and they would perceive the pictures erect, but everything else inverted.

PAYTON SPENCE.
Edenwood Ave., New York.

LACTOPHENIN.

Editor MEDICAL AGE:

In the early years of practice I entertained a strong prejudice against opiates, especially morphine, which I have not entirely lost. Not that I could or would undervalue the great service it has rendered to sick and suffering humanity, but the discomforts and evils which too often follow caused me to search for an agent which, possessing all the good qualities of opium, would at the same time not induce the unpleasant results that accrue to the latter. Latterly my attention was called to phenacetin, of which I used at least my quota, and while in many cases it has proved satisfactory, it is too slow of action, the suffering patient waiting thirty minutes to two hours before obtaining relief; and some cases are entirely unaffected by its use. In the latter I have increased the dose until thirty, forty and (in one case) sixty grains were administered, with no result, and finally perhaps would be obliged to resort to opiun or chloroform. Taking into consideration all there is in idiosyncrasy, I could not understand this great disparity in action, but have now come to the conclusion it is due to the insolubility of the drug—for how could a remedy like this enter the circulation undissolved?

More recently attention was called to lactophenin. While my experience with this medicament has not been so extensive as with other antipyretics, I can assert with positiveness that so far, both upon myself and others, it has not disappointed me in a single instance; it relieves and sustains the system under disease, with no unpleasant after-effects.

In administering lactophenin I direct that the dry powder be placed upon the tongue and followed by about a tablespoonful of hot water or tea; then to agitate in the mouth a moment, before swallowing. In this manner the powder is nearly or quite all dissolved before passing into the stomach.

Its action has been a soothing, quieting relief after one or more doses have been taken, according to the severity of the case. To me it appears to be the ideal anodyne and analgesic.

From all I can gather concerning it, aside from its chemical relations, I am inclined to attribute its prompt and certain action to its ready solubility.

Lactophenin has a fine prospect for the future, and must in my opinion stand at the head of this class of medicinal remedial agents.

J. P. COWLES.
Hartford, Conn.

PECULIAR MONSTROSITY.

Editor MEDICAL AGE:

Monstrosities are always peculiar, but the strangest in my experience I encountered last August.

A lady, a primipara, was taken in labor, on a Saturday night, with moderate pains. On Sunday, being quite well assured that labor was really coming on, she sent for me, a distance of several miles. On reaching the house, I found her about half through with the first stage. Her pains not being very severe, I administered four grains of quinine. In a couple of hours the os was well dilated, so that I ruptured the membranes, when a large amount of amniotic fluid escaped. What the presentation was, now began to baffle me. I could feel nothing but soft parts, and what the soft parts were I could not tell.

The pains began to be more vigorous, the fœtus began to come down. I could gather up in my fingers membranes, which upon traction came down more and more. I kept pulling, and shortly found I was pulling on the scalp. In a little time the whole thing was born. I found a perfectly developed baby, except there was not a bone in the head; it flattened right out without any form whatever, more than there is to a slice of beefsteak. Of course there was no life. The lady assured me that she had felt motion up to the time that labor began. She had gone her full time, and was greatly surprised at giving birth to such a child as that.

Truly,

H. L. BOWER.
Greenville, Mich.

The Medical Age.

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Editorial.

ALBUMINURIA.

One of the questions which have long agitated the medical mind is, whether the presence of albumen in urine is always a pathological condition.

Probably the majority of professional men connected with life assurance organizations will unhesitatingly answer this query in the affirmative; at all events we are not aware of a single assurance company which will, under any conditions whatever, accept as a risk any person whose urine has ever given traces of albumen. Indeed, no less an author than Doctor George Johnson, of Liverpool, who is an extensive writer upon assurance subjects, asserts "the presence of albumen in the urine, though small in amount and occurring intermittently, is always pathological;" and again, "no prudent medical officer will advise that a proposed assurer with a trace of albumen in the urine should be accepted at the ordinary rate of premium."

Doctor Saundby, on the other hand, well known as a pathological expert, lays especial stress on the fact that albumen "may persist for years without the occurrence of renal disease," and that in one instance coming under personal observation "the albuminuria persisted for twenty-one years without supervention of kidney disease."

Doctor Granger Stewart found albumen in nearly thirty-three per cent. of five hundred persons who were presumably healthy, and among these sixty-two per cent. of those over sixty years of age on test developed this abnormality, while among children the proportion was but seventeen per cent. Here comes the natural query: Would it have been safe to insure Doctor Saundby's case twenty-one years ago, or would it be safe now; again, would it be prudent to accept Doctor Stewart's older albuminurics at ordinary rates, or does his inquiry merely go to prove that more persons have crippled renal organs than is commonly supposed?

T. Lauder Brunton declares it would be as grave an error to assume that every individual who has albumen in the urine is suffering from serious disease as to suppose that every patient whose renal secretion contains sugar is necessarily a diabetic; and Doctor Parks, the well known writer upon hygiene, found albuminuria in twelve per cent. of a given number of patients who gave no evidence whatever of renal disease.

Of course, when examining for life assurance, a trace of albumen in the urine, even if no other evidences of renal disease are apparent, must be always regarded with suspicion. But then there are at times mitigating circumstances. Not long since the editor of THE MEDICAL AGE had occasion to examine a young man who gave evidence of albumen in the urine, on the strength of which his application for assurance was summarily rejected. Circumstances brought him under closer observation, when it was found the renal secretion was absolutely non-albuminuric under all circumstances except for a brief period following mental strain or overwork. A change in his life circumstances worked a satisfactory transformation, the albumen disappeared, and he is at this moment apparently in perfect health.

Again, some years since, in an almost parallel case, it was found that albumen developed as the result of excesses at table; with repression of these excesses the albuminuria entirely disappeared; and death by suicide a few years later gave opportunity for examination of the kidneys, which were found in perfect condition. Half a dozen more cases of like import, in which albuminuria was discovered, without any evidence whatever of kidney disease, might be cited, and in which also the truth of the conclusions arrived at was verified by post-mortem. *Per contra*, in a case naturally coming in the same category, but in which the albuminuria had ceased for a period of several months, the patient died suddenly and mysteriously, when it was discovered both kidneys were badly diseased; and yet the most careful examination had failed to reveal the pres-

ence of casts or other evidence, aside from the temporary albuminuria, of any malady.

Drawing conclusions from the foregoing, it appears highly proper to consider every albuminuric as a suspect; at the same time it does not seem either reasonable or just that such should invariably be rejected when seeking assurance, particularly when the collateral evidence of kidney disease is entirely lacking. It would seem that the proper stand for assurance companies to take is, to insist upon a slight increase of premium for a certain number of years, the same to be returned or to apply on later premiums after a sufficient period of observation has determined the absence of kidney disease. It is well known that cheese is very apt to induce albumen in urine. There is every reason to believe also that other articles of diet are equally effective in inducing this condition. Albumen in urine is often only an evidence of faulty or temporarily defective assimilation. Therefore it behooves the medical man in seeking for the origin of albuminuria to inform himself carefully as to the peculiarities of the individual regarding diet, and to closely scrutinize his every-day habits and surroundings. Practical common sense should supplement chemical examination, since the latter too frequently leads to diagnosis *in absentia*.

SPREAD OF DISEASE.

The transmission of maladies from one household to another is often puzzling and not infrequently a subject of astonishment. In residences remotely distant from any source of contagion, disease frequently appears most mysteriously, yet anyone possessed of ordinary intelligence recognizes there must have been some source of infection—servants are often blamed, possibly with justice when they are accustomed to visit in squalid quarters, where germs of disease are especially apt to lurk.

Everyone within a given dwelling that harbors a contagious disease, and who wears the same clothing at home and upon the street, must be open to suspicion as a possible source of infection. It is therefore an excellent and wholesome habit, on all occasions when returning from a crowded car, a church, theater, or other public assembly, to replace the outer wraps by home dress; then if the former are thoroughly brushed, aired, and hung up in the sunlight for a brief period, there is very little danger, even though the wearer may have been sitting for a considerable period beside a person from an infected region. A crowded public assembly of any kind is always a place where contagion or infection may be easily spread by one or two persons.

Usually physicians and nurses take especial care of their clothing, and make frequent changes with the one idea of avoiding spreading disease; consequently there is rarely danger from this source. If every one in a household where disease exists were equally careful, we certainly would hear much less regarding both contagion and infection.

Under the health laws that now almost universally prevail, the ravages of scarlet fever, measles, diphtheria, mumps, etc., have been very greatly reduced. Maladies that were once considered a common heritage, and from which no child could escape, are gradually becoming more and more scarce—so much so that many pass the age of adolescence in complete immunity therefrom.

In the more crowded districts and among the poorer classes such precautions as are here indicated are of course impossible. For this very reason it behooves all the more those who are in a position to take precautions, that they carry these out to the utmost; and if physicians would inculcate this idea in all the families they visit, it would add materially in preventing the dissemination of maladies that even now, in spite of the existing laws, are all too common.

SPONTANEOUS COMBUSTION.

A recent number of the *Texas Medical Journal* contains an interesting article upon this subject, in which the experiments of Doctor Hava, of New Orleans, and the proofs derived therefrom, are rehearsed. Doctor Hava's results go to show that not only is such a phenomenon possible—at least in the case of rabbits—but that it is due to the loading of the tissues with carbon monoxide. It is further remarked:

These experiments of Doctor Hava are possessed of considerable importance, and

have resulted in one of the most interesting discoveries of recent years. They open a new avenue for medico-legal thought, it being possible in the light thus brought upon certain cases held as the results of efforts of homicides to destroy the body of a victim by burning, that an altogether innocent being may be accused of a deed which was never committed, but occurred according to this law of nature, hitherto unknown.

This latter conclusion, however, is not sufficiently proven. The evidence thus far adduced regarding so-called spontaneous combustion is, that it often is *truly spontaneous*, while on other occasions sufficient heat must in some manner be brought into contact with tissues surcharged with some combustible and highly inflammable matter; and finally, there should be no difficulty in distinguishing between cases of true spontaneous combustion and those of attempted cremation, owing to the character of the residue resulting. In the former there is apparently an immense amount of very fine peculiar light ash which has a greasy feel; the tissues that have been consumed, moreover, are distinctly oleaginous, and resemble animal black and give forth a peculiar nauseating odor—distinctions that need but to be observed to be made patent ever after; there is no evidence of a cooking process, as is always apparent when heat is applied externally and not sufficient in degree to entirely consume the cadaver.

CHRONIC DISEASE OF THE UTERINE ADNEXA.

In these days, when chronic disease of the uterine adnexa has become an actual fad, the statement of Doctor William H. Searle, of Plymouth, England, is worthy of attention.

He declares that during twelve years on the staff of the Plymouth Public Dispensary, during which time he saw upwards of 2,000 patients yearly,—and although he takes the greatest interest and pains in his duties, and is keenly on the lookout for such cases,—he has *not* met with a single case of chronic disease of uterine adnexa; that he often sees women who have pain in the region of the ovaries, but the pain is invariably neurotic in character. He concludes: "I see a great many women who have, or have had, gonorrhœa and syphilis. My failure to meet cases of chronic disease of the uterine adnexa is more surprising from this being a large military station, where the girls are free with men at early ages, and where gonorrhœa is common."

While no one doubts the absolute existence of severe and distressing disease of the uterine adnexa, or the brilliant results of wise and just operative measures, careful reflection tends to the opinion that real disease of this character is extremely rare, and that the majority of cases so denominated are in fact neuroses.

VALUE OF HUMAN LIFE.

It may be interesting to know what a human life is worth. This has been a moot question, but appears to have been decided in New York State, where $5,000 is the extreme amount that can be collected as damages in case an individual is killed through the neglect or carelessness of another person or of a corporation.

The law was passed through the powerful influence of the railroad companies centering in New York, and all efforts to have it repealed have thus far proved unavailing. Possibly $5,000 is all a New Yorker's life is worth, but other States set a higher value on their citizens. Further, several of the State constitutions distinctly declare that no law shall be enacted establishing the amount of damages that may be collected for causing death or injury to a person.

DOCTORS' TITLES.

Recently, in the *Westminster Gazette*, a writer described a London practitioner as "Surgeon to the Look Foundling Hospital, the Great Northern Hospital, the Saint Bartholomew Hospital, as well as Senior Surgeon and Lecturer at Charing Cross." Remarking upon this the *Hospital* suggests, "this plurality of appointments would probably be sufficient to satisfy the ambition of most men."

Our English contemporary, however, is very far at sea. Its editor should see some of the "spreads" set forth by American authors, which are so extended as to seriously encroach upon the space devoted to

title-page, though they are in the main meaningless—indeed, the rule seems to be: The smaller and more useless the book, and the weaker the author, the greater the number of appointments.

EDITORIAL NOTES.

Asexualization and Crime.—

Dealing with criminals of a certain class by emasculation and ovariotomy respectively, is discussed by Doctor Robert Boal in the *Journal of the American Medical Association.* He concludes:

The surgical unsexing of all criminals convicted of offenses that indicate constitutional depravities that are transmissible by heredity is both expedient and practicable, and the penalty should be applicable to both sexes:

Most of the offenses against society by vicious and defective classes originate in sexual disturbance, whether in deprivation or excess:

It would limit the reproduction and transmission by heredity of the defective and criminal classes:

Likewise inflict a penalty terrifying and abhorrent without destroying life:

It is applicable to offenses against person or property originating from other than sexual causes:

The punishment is neither cruel nor vindictive:

Finally, it is more effectual in changing and improving the nature of the criminal than moral instruction or confinement in prisons or houses of correction.

Such a measure would certainly reduce the number of hereditary criminals, and criminal instincts are unquestionably hereditary. The great obstacle would be the difficulty of getting it upon the statute books.

Tinea Trycophytina.—

A paragraph is going the rounds of the medical journals to the effect that this malady can be speedily relieved by touching with caustic ammonia.

A better method, in our experience, is to thoroughly anoint the ringworm with soft soap, rubbing in well, washing off only after twelve hours, then replacing with an ointment of *sulphuret* (not sulphate) of potash; the latter should be freshly prepared. Occasional washing with gasoline is often beneficial, care being taken to avoid flame or excessive heat until this substance has thoroughly evaporated.

A Nut for Tee-Tee's.—

The British Medical Association instituted a commission to inquire as to the effects of alcohol on the duration of life in the human subject. The report, which includes 4,234 cases of death, is now made public, and the averages given of ages attained in five different classes:

Total abstainers — Fifty-one years, one month:

Moderate drinkers—Sixty-three years, fifteen days:

Occasional drinkers—Fifty-nine years, two months:

Habitual drinkers—Fifty-seven years, two months.

Drunkards—Fifty-three years, fifteen days.

According to this evidence the most advanced age is attained by moderate drinkers, and the minimum by the total abstainers.

Food for Reflection.—

In connection with the communion-cup scare now being fostered by many journals, who portray the microbic dangers thereof in lurid colors, *Medical Progress* pertinently remarks:

The first thing the bacteriologist knows, the world will be suspecting him of progressing backward. The thing (bacteriology) is now in danger of being carried to as great an extreme as appendicitis. Let us have less of this swallowing a camel and straining at a gnat. The communion cup has come to stay. Let those who are afraid pin their faith to their own wisdom. We have always known that it takes some courage to be a Christian and a physician, but this is one of the least ways in which it is manifested.

New Order of Monks.—

An order of Protestant Medical Monks has been founded in connection with the Anglican (Episcopal) Church, who will have the clerical rank of deacons and devote their time to the poor and afflicted. The only compensation permitted is that obtained by voluntary contribution. It is said there are at present two novices—one a medical student, the other a trained nurse.

Causes of Abortion.—

The three prime factors, according to Theophilus Parvin, are: excessive sexual intercourse, displacements, and syphilis. The illegal practice and instrumental enforcement of the doctrines of Malthus are apparently ignored, yet these in some—not a few—communities exceed all others.

Frost-Bites.—

The *Texas Cqurier-Record* asserts Copaiba balsam is "the sovereign remedy; one or two applications over night often sufficing to establish a cure."

Well! Really, now, what is the climate of the "Lone Star State?"

Asthma.—

Doctor Sanger relieves asthma sometimes by applying a bag of ice to the neck over the pneumogastric.

It might be well to try also the application of cantharidal collodion in the same locality.

Antitoxine Manufacture in America.—

We learn that Parke, Davis & Co. have for some time had under way the manufacture of Antitoxine in the bacteriological department of their laboratory, with a view to experimenting upon its merits.

Billroth's Letters.—

The correspondence of the great surgeon and pathologist is to be published in book form under the editorship of Doctor George Fischer, of the City Hospital, Hanover.

Quackery in Connecticut.—

Hereafter the State Board of Health of the "Nutmeg State" will vigorously prosecute irregular practitioners and endeavor to drive them out of the Commonwealth.

For French Teeth!—

In the French Budget for 1895 is an appropriation of 75,000 francs for the establishment of chairs of dental surgery in the various medical schools.

Let Us Be Consistent.—

Local treatment of diphtheria, as Abraham Jacobi justly says, is "cruel and brutal whenever and wherever applied."

Items and News.

"The Autocrat."—

Oliver Wendell Holmes. Born 1809. Died 1894.

"The Last Leaf!" Can it be true
We have turned it, and on you,
Friend of all?
That the years at last have power?
That life's foliage and its flower
Fade and fall?

Was there one who ever took
From its shelf by chance a book
Penned by you,
But was fast your friend for life,
With one refuge from its strife
Safe and true?

Even gentle Elia's self
Might be proud to share that shelf,
Leaf to leaf,
With a soul of kindred sort,
Who could bind strong sense and sport
In one sheaf.

From that Boston breakfast table,
Wit and wisdom, fun and fable,
Radiated
Through all English-speaking places.
When were science and the graces
So well mated?

Of sweet singers the most sane,
Of keen wits the most humane,
Wide, yet clear,
Like the blue above us bent;
Giving sense and sentiment
Each its sphere.

With a manly breadth of soul,
And a fancy quaint and droll,
Ripe and mellow,
With a virile power of "hit,"
Finished scholar, poet, wit,
And good fellow!

Sturdy patriot, and yet
True world's citizen. Regret
Dims our eyes
As we turn each well-thumbed leaf;
Yet a glory midst our grief
Will arise:

Years your spirit could not tame,
And they will not dim your fame;
England joys
In your songs, all strength and ease,
And the "dreams" you "wrote to please
Gray-haired boys."

And of such were you not one?
Age chilled not your fire of fun.
Heart-alive
Makes a boy of a gray bard,
Though his years be, "by the card,"
Eighty-five!

—*Punch.*

Newspaper Medicine.—

The daily press is creating quite a sensation upon the announcement of the treatment of diphtheria by means of toxines isolated

from cultures of the diphtheria-bacillus. If our newspaper friends had followed the investigations that have been going on in this department of science for the last four or five years, or had taken the pains to have consulted any intelligent medical man who kept himself informed on the progress of his art, there would have been no occasion for the sensational reports that have been published, and that can do only harm, just as occurred in the instance of tuberculin. Now the essence of the recent ferment is that a number of Koch's pupils, including Behring, Wassermann, Brieger, and Ehrlich, have for a number of years been at work upon the subject of isolating from cultures of diphtheria-bacilli a substance that they hoped would be capable, both of conferring immunity to diphtheria and of curing the developed disease; and from reports in current medical literature it would appear as if some measure of success had been attained in these directions. The line of work is no longer novel, and is comparable to that pursued by Pasteur these many years with hydrophobia; by Ferran, nearly ten years ago, with yellow fever; by Haffkine and others more recently with cholera; by Koch with tuberculosis; by Fraenkel with typhoid fever; by the Klemperers with pneumonia; by Tizzoni and Cattani with tetanus. The results, however, cannot yet be said to be final or conclusive, and it will be well to withhold a verdict until sufficient data have been collected on which an intelligent opinion can be based. There is no reason to believe that true scientific interests will be furthered by the periodic sensational discoveries of the newspapers.—*Medical News.*

Correction of Urinous Odor.—

It is well known that the essence of turpentine gives, when taken internally, an odor of violets to the urine. This fact has been put to good account by giving the essence in ten-drop doses three times daily to persons afflicted with incontinence of urine. In a short time the disagreeable odor of the secretion is replaced by the characteristic odor of the violet, to the great satisfaction of those about the patient. The treatment can be continued without inconvenience for several weeks, and is only contra-indicated in gastric catarrh and nephritis.—*Kansas Medical Journal.*

The Evil of Proprietary Medicines.—

Especially reprehensible is a habit which threatens to become more and more general —I mean prescribing proprietary medicines, particularly those that contain narcotics. By doing so the physician not only jeopardizes the physical and moral future of his patients who buy these vile compounds indefinitely, thinking they have struck the right remedy, but he helps to develop a branch of pharmaceutical industry which constitutes a crying evil.—LUDWIG [illegible], in *Medical Fortnightly.*

Worms—Not Epilepsy!—

Carnivorous animals are often subject to convulsions, which fact is being employed as an argument against the eating of meat by epileptics.—*Exchange.*

[Yes, and graminivorous créatures also suffer from convulsions, even from epilepsy; and all classes of creatures are subject to parasites and the results accruing to playing host to these vermin.—ED.]

Antidote to Snake-Bite.—

Doctor Mueller, of Australia, claims that Strychnine is a certain antidote to serpent venom. The Indian Government has recently had a series of experiments conducted with a view to test its efficacy. The results thus far have not been entirely satisfactory, but the experiments are to be continued for two years more before a final judgment will be passed. —*Medical Record.*

Double Pay for Twins.—

A man in Ohio was arrested not long ago at the instance of a woman who claimed that he was the father of her unborn child. He was released on payment of $300. But when the time came it was found that there were twins, and the poor man was arrested again, and the penalty for his misdoing was promptly doubled by a sympathetic jury.—*Medical Record.*

New Instruments.—

By reading some of the descriptions and looking at some of the illustrations, we are forced to the conclusion that in order to invent a new surgical instrument it is only necessary to bend the ax-handle or change the length of the blade.—*Kansas Medical Journal.*

Alkaline Milk.—

Alkalinity in milk is always suspicious, for it is evident that it has been "doctored." The most dangerous alkali is bicarbonate of soda, for in milk thus treated the ptomaine-producing germs develop best.—DOCTOR ABRAHAM JACOBI.

The Eye in Tuberculosis.—

Dentree declares in the majority of cases there is an unequal dilatation of the pupils.

Book Reviews.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 per year. Charles Scribner's Sons, New York.

The Christmas number presents a remarkable list of popular writers, and opens with a poem by Rudyard Kipling, entitled "McAndrews' Hymn." Another poem with striking pictures is "The Wood-Cutter's Hut," by A. Lampman. H. C. Bunner contributes another of his suburban sketches, entitled "The Story of a Path" from its origin to the present day; Robert Grant furnishes another Christmas tale, "The Matrimonial Tontine Benefit Association." Other fiction is an amusing railway story by Francis Lynde, entitled "By Special Invitation;" the pathetic tale of a spiritualistic medium, entitled "Minnehaha," by Eva Wilder McGlasson; the story of a sensational discovery in Egypt, "The Mantle of Osiris," by Walter L. Palmer; and the concluding chapters of "John March, Southerner," by George W. Cable. One of the richest illustrated articles ever published in an American magazine is the account of the great English painter, George Frederick Watts, R. A., by the eminent art critic, Cosmo Monkhouse. Brander Matthews contributes a story entitled "A Primer of Imaginary Geography;" "Cast Shadows" is by Philip Gilbert Hamerton, painted by Émile Friant. The poems by Dorothea Lummis and Hannah Parker Kimball, and "The Point of View," complete the number.

THE PETERSON MAGAZINE. Price, 10 cents; $1.00 a year. Penfield Publishing Co., New York and Philadelphia.

The contents of the November number are: "The Boston Public Library," by Elmer Ellsworth Garnsey; "The Charmed Picture," by F. H.; "A Belated Eden," by Julian Hawthorne; "The Charge," by Philip Becker Goets; "The Loves of Rebecca and Basil," by Marvin Dana; "Her Masterpiece," by Randall Neefus Saunders; "Some Eminent Women Painters," by O. L. Hall; "The End of a Song," by Mary F. Nixon; "The Ribbon," translated from the Spanish by Ethel Hatton; "Diana," by Wallace Wood; "A Graphiological Puzzle," by Marie Nantz; "Uncle Lot's First Circus," by Amelia E. Wofford; "A Threnody," by John Patterson; "Two Great Political Leaders," by Henry L. Stoddard; "The Theatrical Season of 1894-95;" "Sam Sandy's Reclamation," by Robertus D. Love; "Fame," by William Sidney Hillyar; "A November Idyl," by L. H. Neff; and the usual quota of essays under the caption By the Fireside.

THE OVERLAND MONTHLY. Price, 25 cents; $3.00 a year. Overland Publishing Company, San Francisco.

The Christmas number is the most attractive that has ever been issued. Mr. Wildman contributes a pathetic little Christmas story in "As Talked in the Sanctum;" Joaquin Miller's "The Song of the Balboa Sea" continues to grow in interest. Mr. Paul's narrative of the doings of the "Vigilance Committee of '56" is brought to a close. Professor Ansot contributes a beautifully illustrated article on "Fencing on the Pacific Coast;" under the caption, "The Decline of the Mission Indians," Messrs. Scanland and E. P. Clark throw some light on the much mooted question. In this number also is the initial issue of a series of biographical sketches entitled "Famous Californians of Other Days." Mr. Wildman has another Malayan sketch, "The Rivals," Mr. Reed a story of Indian life in the Southwest, Mrs. E. S. Marshall a paper on "Prickly Plants of California," and Charles S. Greene a unique little poem entitled "Taking Toll."

MCCLURE'S MAGAZINE. Price, 15 cents; $1.50 per year. S. S. McClure (Limited), New York.

The December number presents the second article on Napoleon, with fourteen more portraits, showing him at the time he suddenly became the greatest man of his day; the story of his courtship with Josephine, likewise the extraordinary campaigns in Italy and Egypt, and his marvellous rise to supreme authority in France, are fully narrated. Bret Harte writes of Mark Twain, and gives many experiences of himself and the great American humorist. Archdeacon Farrar writes on the child Christ, illustrated by reproductions from many paintings. Conan Doyle offers a story which deals with a thrilling diplomatic episode connected with Napoleon's evacuation of Egypt. The Pinkerton Detective article describes how James McParland overthrew the Molly Maguires. Professor Henry Drummond contributes a study of the career of D. L. Moody, the evangelist.

THE CANADIAN MAGAZINE. Price, 25 cents; $2.50 per year. Ontario Publishing Co., Toronto.

In the November number James Dickson writes of "Ontario's Big Game;" Bernard McEvoy contributes a story entitled "A Collector of Materials;" David Boyle writes of "Where was Vineland," Allan Eric of "Land of the Pilgrims," J. Castell Hopkins of "The Position of the Established Church," Fred. T. Hodgson of "The Round Towers and Irish Art," Walter Townsend of "The Clown

in Twelfth Night," H. S. Grant Macdonald of "Glimpses of Mexican Life," Attorney-General Longley of "Joseph Howe," T. P. Bedard of "A Decade of the History of New France, 1660–1670;" A. H. Morrison contributes a story entitled "Face of Phantom." The poetry is by John Imrie, Fidele H. Holland, and E. A. There are the usual "Gable Ends," "Book Notices," and "Scientific Notes."

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 a year. J. B. Lippincott Co., Philadelphia.

The complete novel in the December issue is "Mrs. Hallam's Companion," by Mrs. Mary J. Holmes. Other contributions are: "Shooting Bob White," by Calvin Dill Wilson; "Shall I Study Medicine?" by A. L. Benedict; "A Western Daisy Miller," by Claude M. Girardeau; "Living Pictures at the Louvre," by Alvan F. Sanborn; "A Creed of Manners," by E. F. Benson; "Don Jaime, of Mission San José," by Charles Howard Shinn; "A Live Ghost," by Ellen Mackubin; "Some Notable Women of the Past," by Esmè Stuart; "An Odd Neighbor," by Charles C. Abbott. The closing installment of "Talks with the Trade" discusses "The Personal Element" in literary business. The poetry of the number is by Florence Earle Coates, Susie M. Best, H. Prescott Beach, and Clarence Urmy.

THE DELINEATOR. Price, 15 cents; $1.00 per year. The Butterick Publishing Co., New York.

The December or Christmas number is full of unusually good things, among them the "New Skirts of the Season," which embody one of the most pronounced departures of fashion in the matter of feminine apparel. The general contributions have a distinctive flavor of the holidays—"Christmas Cheer," "Some Useful Gifts;" "A Plantation Christmas;" "A Christmas Entertainment;" "Christmas Work for Children." Barnard College is the subject of a paper by a graduate of '93; and there is a practical and helpful article on Photo-Negative Retouching as an Employment for Women.

SLAV AND MOSLEM. By J. Milliken Napier Brodhead. Cloth; 8vo; pp. 300. Aiken Publishing Co., Aiken, S. C.

The American press has been almost a unit in condemning the career of Alexander III. of Russia up to the moment of his death, when there was a sudden shifting, and fulsome compliment took the place of merciless censure. The fact is that the American press has been slavish in its tendencies and desire to cater to possible voters; consequently it has apparently been in sympathy with foreign nihilists and anarchists.

This book is calculated to undo a great deal of prejudice which has thus originated in the general newspaper press. Mr. Brodhead has made a thorough study of Muscovite history and of the conditions existing in the Empire of Russia to-day, and he explains intelligently both why the development of this great country up to the last half-century has been so slow, and what the future of the country is to be. His view of Russia is broad and catholic; both sides of the question are carefully and consistently weighed—and in this respect he differs greatly from such writers as George Kennan, who permits his prejudices to hurry him along and consequently ever fails to present the obverse of situations.

Recognizing the crudities and anomalies of her civilization, Mr. Brodhead wonders not that Russia is behindhand in some things, but that she should have done so much toward retrieving the past, and become a leading factor in the politics of Europe to-day, so that it is not among the impossibilities that she may at an early date become the arbiter of its destinies in the future.

The author's knowledge of Russia is a most intimate one. His book deserves the most careful attention of all who desire accurate information as to existing conditions in the Muscovite Empire.

THE WILDER QUARTER CENTURY BOOK. Dedicated to Professor Burt Green Wilder. Cloth; pp. 493. Price, $5.00. Comstock Publishing Co., Ithaca, N. Y.

No more graceful tribute could be well conceived than this volume, which is made up of contributions by seventeen of Professor Wilder's former pupils who have become more or less famous in sundry scientific departments. Thus we are offered a portion of the papers on physiological subjects, including vertebrate zoölogy and neurology, the value of which is practically incalculable. Doctor David Starr Jordan, LL.D., President of Leland Stanford Jr. University, contributes the first paper, entitled "Intemperance and Vertebra," which discusses with clearness the relation of the spinal column among fishes to the depression of water, and the character of the struggle for existence. John Henry Comstock, Professor of Entomology in Cornell, discusses "The Application of the Theory of Natural Selection in the Classification of Animals and Plants," illustrated by a study of evolution of insect

wings. Doctor Rollin Corson writes of "The Vital Equation of the Colored Race." Doctor Theobald Smith treats of "The Fermentation Tube," Doctor William Krauss of "Muscular Atrophy;" Doctor Herman Biggs writes of "Bacteriology of Lepo-meningitis," Doctor V. A. Moore of "The Flagella on the Bacillus Cholerae Suis;" Grant S. Hopkins discusses "The Nature of Lymphatic and Enteric Epithelia of the Great Lake Dog-Fish;" Pierre A. Fish writes on "Brain Preservation." The other papers are equally as interesting, and they as well as the illustrations are of a high order of merit. A finely executed portrait of Professor Wilder constitutes the frontispiece.

THE GOSPEL OF BUDDHA. By Doctor Paul Carus. Cloth; 12mo; pp. 275. Price, $1.50. The Open Court Publishing Co., Chicago.

The contents of this volume are derived from the old Buddhist canon. The most important passages are literally copied from the translations of the original text, while others are rendered freely in order to make them intelligible to the present generation; others have been rearranged; others again are abbreviated. Besides the three introductory and three complete chapters, there are only a few purely original additions, which, however, are neither mere literary embellishments or deviations from Buddhist doctrines, since they contain nothing but ideas for which prototypes can be found somewhere among the traditions of Buddhism, and have been added simply as elucidations of its main principles.

Of especial advantage is the table of reference which has been added for the benefit of those who desire to trace the Buddhism of the volume to its fountain-head; and this table indicates as briefly as possible the main sources of the various chapters, and points out the parallelisms with western thought, especially in the Christian gospels.

Neither is the book an attempt to popularize Buddhist religious writings or present them in poetic shape; it is simply intended to be an aid to better comprehension of the tenets of Buddhism—to set the reader thinking on the religious problems of the day. It is a picture of religious thought as it existed in the remote past, brought to bear on the living present.

THE LITTLE BOOK MAN. By Mrs. J. F. Willing. Cloth; 12mo; pp. 300. Price, $1.00. Cranston & Curts, Cincinnati.

This is certainly an oddity in the way of literature. The author, in a connected story of two young people—who have been stolen at an early age from their homes and brought under the care of the Roman Catholic Church, which is on the lookout for the results of their heirship,—weaves in an immense number of quotations from the lips of an ignorant individual, whose literary knowledge is entirely confined to Scripture. The author purports to illustrate the methods by which the Jesuits seek to accomplish their ends, and claims that no principle of right or truth and no human obligation or relation is too sacred to be ignored or openly violated if such stands in the way of success.

The work is interesting and no doubt will prove very satisfactory reading to many Protestant families. Nevertheless we cannot avoid the criticism that the author is not as familiar with the history of Jesuitism or of the Roman Catholic Church as is essential to the plot of the work, and hence is frequently a long way from the truth. We do not say this from a religious, but purely from a secular standpoint. Where a work of this class is put forth, the closest study of the main historical facts is demanded. But, as before remarked, the work is interesting, and may possibly in some walks of life be of benefit.

THE CHARAKA-SAMHITA. By Avinash Chandra Kaviratna Kaviraja. Royal 8vo; 12 fasciculi yearly. Price, £3 per year. M. Audit, 200 Cornwallis Street, Calcutta, India.

The first ten numbers of this work are before us, and they far exceed our greatest expectations.

It is well known that the scientific hygienic medicine and hygienic literature of the ancients is exceedingly voluminous, and that the most ancient and complete of all is the work known as Charaka-Samhita. The age of this is not its only recommendation, since it is a most comprehensive treatise on diseases in all their bearings upon health, and abounds in weighty aphorisms, the truth of which will extort the admiration of the modern reader. It is, moreover, highly philosophical; its utterances on many subjects, unsurpassed for brevity and weight, are, like those of Bacon, extremely suggestive. This is the work which Professor Wilson declares the Arabians studied and from which was derived through the latter people by the Greeks their knowledge of medicine. To-day scientific men of all classes can derive therefrom incontestable benefit. It treats of the science of living; the philosophy of human health; the pathology of maladies, many of which are peculiar to India. It proves, moreover, that much of the so-called modern

pathology, far from being new, is most ancient; that science, after all, travels in a cycle. Finally, the work exhibits a full picture of the manners of an important section of humanity—a branch, viz., of the same Aryan stock to which European and American people belong.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES FOR 1894. Edited by Doctor Charles E. Sajous and seventy associate editors. Five volumes; cloth; 8vo. Price, $15.00. The F. A. Davis Co., Philadelphia.

Some idea of the magnitude of this work may be gained from the fact that nearly 1,200 medical journals have been examined and all that is of value incorporated. The work has thus increased in importance from year to year until it is now a practical epitome of twelve months' progress in general medicine and sanitary science throughout the world. The executive ability which renders this possible can only be understood when it is remembered that a large share of the journals are in foreign languages, and that these have to be carefully examined and translated. During the last year there have also been one hundred and seventy-six books, monographs and theses examined. Only the superb application of more than two hundred workers renders such labor possible. The aim is to collect all additions to medical knowledge appearing in any publication, in any country, by any race, in any language.

This is one of the works which are imperatively demanded in the library of every physician. It matters not how many periodicals one may subscribe for, or how many volumes of transactions and text-books are purchased, the need of Sajous's annual is still imperative, since no physician has either the time or strength to review for himself this vast field, of which he certainly should have at least a general idea.

DICTIONARY OF ELECTRICAL WORDS, TERMS, AND PHRASES. By Edwin J. Houston, Ph.D. Cloth; pp. 669. Price, $5.00. The W. J. Johnston Co., Ltd., New York.

That there is a general necessity for such a work as this, is evidenced by the fact that this volume is now in its third and greatly enlarged edition. It is indeed an encyclopædic dictionary of electrical science fully brought up to the year 1894. Some idea of its scope may be formed when it is known that it includes upwards of 6,000 distinct words, terms, or phrases; moreover it has 582 specially drawn illustrations. Each of the great classes or divisions of electrical investigation or utilization obtains careful and exhaustive treatment; likewise close attention is given to the more settled and hackneyed phraseology of the older branches of the art. Every source of information has been drawn upon. Not only have libraries been ransacked, but also note-books of the laboratory and catalogues of the wareroom.

Finally, the plan of the volume is such as to bring it within the reach of the entire community; it is an actual necessity to the general public in order to enable them to intelligently understand their own language, which is now becoming so thoroughly imbued with electrical words, terms, and phrases. To the editor, the intelligent reader of scientific periodicals, the school-teacher, the college professor, the lawyer, the doctor, it supplies a work of reference absolutely indispensable.

THE PHYSICIAN'S PERFECT CALL LIST AND RECORD. By Doctor G. Archie Stockwell, F.Z.S. Flexible morocco; long 16mo; pp. 200. Price, $1.50. George S. Davis, Detroit.

The fact this publication has reached its *ninth year* is sufficient evidence of its popularity and practical usefulness. Its paper and binding are alike superb. In size and shape it is by long odds the most convenient and the best of the "Visiting Lists;" moreover, it will not crumple or break down in the pocket.

A prominent feature is the absence of all advertisements and other "dead-wood," and the extremely convenient arrangement of its most practical contents. Of the information afforded, that most demanded for ready reference is to be found upon the inside covers or on the fly-leaves. The posological information and dosage table are to a great extent new departures, being very thorough and complete; further, the latter is newly revised, and embraces the very latest (including the non-official) remedies introduced, up to and inclusive of July, 1894.

Especially commendable is the obstetric table in two colors, and the arrangement for the concise keeping of all accounts, debit, credit, expense, profit and loss, loans, etc. No physician can afford to be without this work.

PRACTICAL MANUAL OF MENTAL MEDICINE. By Doctor E. Régis. Cloth; small 16mo; pp. 691. Translated by H. N. Bannister, M.S., M.D. Press of the American Journal of Insanity, Utica, N. Y.

Doctor Bannister has certainly made a marked success from the concise, clear and methodical manner in which he has translated the more important facts of medicine and medico-legal psychiatry. The work is invaluable to the general practitioner from its

clinical and practical researches, and also from the fact it is a condensation of a vast amount of material collected in all quarters of the globe and concisely arranged in consecutive order. Again, certain chapters are practically didactic in the very elaborate manner in which they are treated. We can cordially recommend the volume to all classes of practitioners, as it is—as the *American Journal of Insanity* pertinently remarks—the first instance of a book written by an alienist, translated by an alienist, and under the direction of an alienist printed and bound by the insane.

LAMPS OF THE TEMPLE. Edited by Thomas W. Handford. Cloth; 16mo; pp. 374. Price, 50 cents. Laird & Lee, Chicago.

This is a series of choice examples of the eloquence of the modern pulpit. It embodies tracts by Henry Ward Beecher, Rabbi Schindler, Phillips Brooks, Charles Kingsley, C. H. Spurgeon, Theodore Parker, Theodore Cuyler, David Swing, Cardinal Manning, Cardinal Gibbons, Canon Liddon, Cardinal Lavigerie, Archdeacon Farrar, Rabbi Hirsch, Heber Newton, and many others.

No review can do justice to such a collection. Even to those who are not religiously inclined these tracts appeal, in that they are the presentations of some of the ablest clergymen of all denominations the world over.

LITTELL'S LIVING AGE. Price, 15 cents; $8.00 per year. Littell & Co., Boston.

For more than half a century this magazine has held a place in the front rank of American periodicals, week after week being freighted with the most valuable literary products of foreign lands. It selects with rare judgment and discrimination the most masterly productions, scientific, biographical, historical, political; the best essays, reviews, criticisms, tales, poetry; in fact everything the intelligent reader most desires to obtain.

To the busy man of affairs, and to the mistress of the family with time occupied with domestic cares, such a magazine is invaluable, and yet with its wealth of choice and interesting matter it appeals with not less force to those of elegant leisure and scholarly tastes. So to all classes of intelligent readers it proves a welcome visitor. An unparalleled offer is made to new subscribers, whereby they may obtain all numbers of this periodical, from the beginning of the current series, January 1st, 1894, to the end of the year 1895, postpaid, for only $10.00. These volumes already embrace copyrighted serials from the pens of noted French and German novelists, and also "Margredel, a Fireside History of a Fifeshire Family," one of the finest works of current fiction. Besides these there are numerous short stories by the best English authors.

To all new subscribers for the year 1895 alone, will be sent absolutely free the thirteen weekly issues of the last quarter of 1894, forming an octavo volume of 824 pages.

Therapeutic Brevities.

Management of Tonsillitis.—In *Centralblatt für Chirurgie*, Doctor Haberkom discusses the management of this malady, and remarks that chlorate of potash, alone or in combination, is universally disappointing. Salicylic acid produces excellent results when applied judiciously. The only proper mode of application is in the form of powder directly to the tonsils by means of a rather large camel-hair pencil.

When the tonsils are covered with a thick mucous coating, which may be diphtheritic, it is necessary to previously remove it, when the following liquid, also applied with a brush, acts extremely well:

℞ Pepsin, 30 grains.
Hydrochloric acid dilute, 60 minims.
Water, 5 drachms.
Glycerin, 4 drachms.

The coating over the tonsils is quickly dissolved (digested) by this solution. Besides the local application it is advisable to give internally:

℞ Acid salicylic, 30 grains.
Mucilage of acacia, 1 ounce.
Simple syrup, 4 drachms.
Water, 4½ ounces.

Tablespoonful every two hours.

In the more chronic forms it is well to pencil the tonsils over with:

℞ Tannin, 15 grains.
Iodine tincture, 2 minims.
Glycerin, 5 drachms.
Water, 2 ounces.

This may be also used as a gargle, and in severe cases the strength may be increased by leaving out half the amount of water.

Rational Therapeutics.—In a recent paper published in *The Practitioner* Doctor P. H. Pye-Smith concludes with the statement that the list of specific remedies—mercury, quinine, ipecac, iron, arsenic, and salicyl compounds—is not a large one. He urges the importance of first giving fair play to direct and simple remedies. He says, test the efficiency of physiological remedies, and do not give potassium acetate, broom preparations or copaiba, with the vague notion that they do good in dropsy, but make sure that the amount of renal secretion is increased. Use the true specifics, which are well tried and certain, thoroughly, with confidence and perseverance, pushing the doses until some evidence of their physiological action is obtained.

Mix purgative, diuretic and other physio-

logical drugs, but always give specifics each by itself.

Finally, Doctor Pye-Smith urges the uselessness of many and much-advertised new drugs, for which are claimed wonderful specific or physiological powers on the slightest possible grounds, adding: "It takes a lifetime to know how to best use opium, digitalis, and other trustworthy drugs."

Arbor Vitæ in Uterine Polypus.—A woman of thirty suffered from uterine hæmorrhage due to polypus. Her stomach became so deranged from the excessive use of hydrastis and digitalis that even the simplest food could not be tolerated, and dropsy supervened; the legs being swollen to twice their normal size, and the abdominal cavity harboring several liters of fluid. The heart was so weak that it would respond only to the strongest stimulants. An operation was deemed an unsafe procedure, so resort was had to small and repeated doses of *Thuja occidentalis*. In a few days the hæmorrhage ceased, the accumulations of fluid were excreted through the kidney; she improved rapidly, and in a few weeks left her bed. Thuja was continued for several months, as the menstrual flow continued to be considerable. In about four months a polypus was passed from the uterus, with a pedicle several centimeters long, which was easily snipped off, but which would have come away of itself if left alone.—*Monatsblätter.*

Nuclein Therapy. — Doctor Victor C. Vaughan concludes after many experiments that Nuclein is a germ-destroying substance. By repeated trials he was able to cure guinea-pigs that had been inoculated with tuberculous germs; farther, Nuclein rendered other guinea-pigs insusceptible to the action of pneumonia germs. In human beings Nuclein has cured cases of tuberculosis in the primary stages and delayed the disease when farther advanced; it apparently, however, has no effect in advanced stages. The difficulties in preparing are many, and the results obtained are improved in proportion to the perfection of the process of manufacture. It is believed that Nuclein not only destroys disease germs, but also acts as a food or stimulant to those organs in the body which normally furnish Nuclein to resist invading germs.—*Druggists Circular.*

A Suggestion for the Treatment of Skin Diseases.—Doctor Alston, of Trinidad, is the inventor of an ingenious and possibly effectual plan of securing the entrance into the diseased integument of medicaments destined to combat the ravages of the parasite of tinea tonsurans. His idea, which he is unfortunately debarred from putting into practice owing to the scarcity of this particular parasitic disease in his parts, consists in the application over the affected area of a miniature air-pump (*qua* cupping glass), which would, it is conceived, withdraw the air from the skin and render the latter more than usually porous. This having been done, and the cupping glass being retained *in situ*, the medicament is sprayed therein, to be greedily absorbed by the thirsty integument.—*Canadian Practitioner.*

Arbutin as a Diuretic. — This glucoside, which is derived from pipsissewa, wintergreen, uva ursi, trailing arbutus, etc., is a white crystallizable substance of slightly bitter taste, freely soluble in water. It is a diuretic soothing to the entire urinary tract. It is especially useful in the very common form of irritable bladder, evidenced by constant desire for micturition, great straining with severe pain and the passing of only a few drops of scalding urine. Given in doses of $\frac{1}{6\frac{1}{7}}$ grain every fifteen minutes, it acts like magic, entirely relieving the symptoms in a short time and producing a flow of perfectly bland urine. No other remedy has ever given me such excellent results as a diuretic, and the more I study its action the better I like it.—W. L. JOHNSON, in *Alkaloidal Clinic.*

Treatment of Goitre.—Doctor Reverdin, of Geneva, reports fourteen cases of thyroidectomy, ten in females and four in males, with only one fatality, which occurred on the fifth day from softening of the trachea which tracheotomy failed to relieve. He prepares his patient for operation by a long course of iodoform administered internally in the form of pills—he never operates until he has persisted in this administration, unless the symptoms are very urgent. He finds enucleation the best method, and employs a single median incision. It is very necessary to prevent the loss of blood by the lavish use of forceps, but he does not deem it essential to wash out the sac with antiseptics.—*Le Progrès Médical.*

Cascara Sagrada in Hæmorrhoids.—Mr. T——, aged fifty years, a farmer, had suffered with piles for thirty years, and had used many remedies, all to no purpose. I gave him a four-ounce bottle of fluid extract Cascara Sagrada, one teaspoonful to be taken every evening on going to bed. He assured

me that this entirely relieved him—in fact he has several times spoken of this. Now, after a lapse of more than two years, there is no sign of his hæmorrhoidal trouble, nor has there at any time been any relapse. I find the Cascara among the best remedies to relieve chronic constipation. It acts well as a bitter tonic and stomachic also.—DOCTOR J. P. SHAFER, in *Louisville Medical Monthly.*

Electrolysis in Stricture of the Urethra.—Rovsing, of Copenhagen, has tried electrolysis in stricture of the urethra, using an instrument with olive-shaped electrodes, and is favorably impressed by the results. He believes the method to be indicated in cases in which treatment with bougies has given no result, and in which internal urethrotomy is inadvisable owing to the danger of infection, etc. He first employed a current of one to twenty milliamperes for fifteen minutes, and later one to thirty for three-fourths of an hour, the negative electrode being applied in the urethra.—*Hospitals-Tidende.*

Cactus Grandiflorus.—In the Philadelphia *Polyclinic*, Doctor Charles Herwisch recommends fluid extract Cactus Grandiflorus (P., D. & Co.'s) in doses of from five to ten drops three times a day, as a heart stimulant and substitute for digitalis. He says it does not prolong diastole as does the latter, and on this account is of value in diastolic murmurs. It is also valuable in functional disorders of the heart connected with neurasthenia, anæmia, exophthalmic goitre, tobacco heart, etc.

Carissa Xilopieron.—Cups are turned from American Bittercup, which, when filled with water or wine, after a time impart thereto a bitter flavor, when the liquid becomes febrifuge, stomachic, and vermifuge. In the Mauritius, where the plant is known by the name of "bitter-wood," it is used as a tonic, diuretic, and febrifuge. The fluid extract is administered in intermittent fever as an auxiliary of quinine.—*Fortschritte der Medicin.*

Paste Used by Dentists to Destroy the Nerve of a Tooth.—

Menthol, Carbolic acid, ā ā 1 drachm.
Cocaine (pure), ½ drachm.
Rectified spirit, 2 drachms.

Rub up together, and add—

Collodion (meth.) to make 3 ounces.

—*Chemist and Druggist.*

Stomach Disorders. — In some instances when there is marked arythmia of the heart with consequent circulatory disturbances it is well to begin treatment with from eight to ten drops of tincture Strophanthus (P., D. & Co.) in conjunction with sodium or strontium Bromide to control the cardiac irregularity. —JOSEPH M. PATTON, in *Chicago Clinical Review.*

Neuralgia of the Trifacial.—According to Leibreich, Butyl-chloral possesses, in addition to its soporific properties, a truly specific action on the trifacial nerve; anæsthesia is produced along the whole of its course after the administration of from fifteen to forty grains of this drug.—*Journal de Médecine.*

Gangrene of Lungs.—Doctor Korazy recommends inhalation of a solution of Corrosive Sublimate—five centigrammes to 1000 grammes of water—repeated three times daily. He employs twenty cubic centimeters of the solution at each sitting.—*L'Union Médicale.*

Ergot for Enlarged Tonsils.—Five or ten minims of Normal Liquid Ergot, injected into a hypertrophied tonsil, does away with the necessity of employing the tonsillotome—causes the enlargement to recede.—DOCTOR JAMES CASTLE, Lynn, Mass.

Iodized Collodion as a Depilatory.—*L'Union Médicale* gives the following: Alcohol, forty-eight; iodine, three; collodion, 140; oil of turpentine, six; castor oil, eight parts. To be applied every day for three or four days.

Antiponin.—This is the trade name of the white, unctuous, insipid, very soluble polyborate of sodium. It goes without saying it is recommended as an antiseptic.

Hiccough.—Apomorphia, hypodermatically in one-twentieth grain doses, frequently relieves hiccough when everything else fails.

Use of Creosote.—This drug should not be employed in cases of tuberculosis in which hectic fever or hæmorrhage is present.

Tonsillitis.—Tonsillar sore throat is often much benefited by Calomel, in one-fourth to one-half grain doses every two hours.

Medical Progress.

THE COD-LIVER OIL QUESTION.—Among the many disputed questions of therapeutics, few attract more attention than that of the relative value of the different preparations of cod-liver oil. Unquestionably, cod-liver oil enjoys an enviable and unsurpassed reputation in the treatment of wasting diseases, and this is wholly merited. The question is not as to value and reliability, but as to how it may best be exhibited.

In what does the value of the oil consist? Of course, almost its whole bulk is made up of the fatty matters which give its characteristic appearance. Combined with these, there are minute quantities of iodine, bromine, and phosphorus, and certain alkaloids and bile salts of very complex chemical nature. Experiment in French and German laboratories has proved that these alkaloids and salts, when extracted from the oil, exert a marked effect upon the system, chiefly diuretic and stimulant. From this it is inferred by some that the beneficial effect of cod-liver oil comes entirely from these extractive principles, and, as a result of this theory, some pharmaceutical manufacturers have put into the hands of the physicians so-called "cod-liver oil" preparations, which contain no cod-liver oil whatever, but instead a minute quantity of these extractives. Now, do these preparations contain "all the active medicinal constituents of cod-liver oil," as their proprietors claim; and is it advisable for the physician to give up cod-liver oil and to prescribe these extractive preparations?

As every physician knows from experience, the most apparent results of the exhibition of the oil are enrichment of the blood and a very rapid increase of fat. But, as has been stated above, the effect of these extractive principles of the oil is almost entirely *diuretic and stimulant!* Will this alone account for the effect produced upon the system? It seems to the writer that it will not.

We have in the oil a combination consisting chiefly of the palmates, stearates and oleates of glycerin—the oleate making up the bulk of the oil. Is not the assimilation of these fats an essential part of the process of "system building" which results from its administration?

Some forms of neuralgia, which resist the ordinary remedies, will succumb to the plentiful assimilation of fats, and in such cases cod-liver oil gives better results than any other oil; this fact certainly points to the conclusion that the fat plays an important part in the effect of the oil upon the system. Some authorities, as Doctor Brunton, of the Royal College, look upon the oil as a food rather than as a medicine. Doctor Brunton says: "Its therapeutical use depends on two properties—its ready absorption and its ready assimilation."

Many very interesting physiological experiments have been carried out by eminent investigators in order to throw some light on this question, and these seem to point definitely to the conclusion that a considerable part of the effect of the oil is due to the fatty principles which it contains. The experiment of taking two loops of the intestine, filling one with ordinary oil and the other with cod-liver oil, and then replacing them, proves that cod-liver oil is absorbed much more readily than ordinary oil. Further, experiment has shown that the oil is found in minute globules outside of the intestine after its administration. This, also, seems to point with no uncertain finger to the importance of the fats. Consequently, in considering the therapeutics of cod-liver oil, we must look upon the oil itself as an essential factor, and the iodine, phosphorus and alkaloidal principles as only in part accounting for its beneficial effect. This conclusion makes it impossible for us to admit the claim that the so-called "cod-liver oil" preparations which contain no oil whatever, but only its ptomaines and other extractive materials, have the same therapeutic value as the genuine oil.—DOCTOR EDGAR F. BILLINGS, in *St Louis Medical and Surgical Journal.*

APEPSIA, DYSPEPSIA AND BRADYPEPSIA.—All pathologists are in accord in wishing to banish the word "dyspepsia" from our nosology, but it is one we are constantly using and hearing used without protest and yet without any warrant for its employment. It would seem to be due to our fondness for prescribing and administering the innumerable so-called remedies, in place of carefully working out a rational system of therapeutics for ourselves. It is much easier to direct the taking of a little bicarbonate of soda, of bismuth, of calumba and ginger, than to endeavor to discover amongst the complex chemical and mechanical problems of digestion and assimilation, which organ, which function or which ferment is in fault. "To know what we do, and why we do it, is a rare faculty," says Bouchard, "but to the doctor it is entirely novel."

Such a prescription as the above is given to relieve pain; then we give diastase, pepsin, pancreatin, papain, myrosin, and so on, to relieve the stomach of its work and duties altogether. Or the stomach is washed out with a syphon, paralyzed hydraulically, and allowed

to set to work once more. This is pure empiricism; treating the results of the disease instead of the disease itself, or a disease in place of a patient who is suffering from it.

Ever since the time of Galen we have had bradypepsia and apepsia—the former (from *βραδυς, slow*) simply meaning an unusual prolongation of the digestive act, the latter its arrest altogether. The term "dyspepsia" was invented by De Goris much later, and applied to a condition characterized by sour eructations, fœtid dejections, and evidence of putrefactive decomposition of the food. It meant, then, a state not merely mechanical, nor simply unduly prolonged, nor of complete inactivity, but a chemical change which leads to decay in place of disintegration. If the word were used strictly in this sense it would be unobjectionable and would have a clear and precise meaning, but this is exactly what is rarely done.

Accepting this definition, one understands why the word occurs so rarely in the lists of cases treated by specialists. In fact, the cases of chemically defective digestion due to some known cause such as cancer, chronic gastritis, mucous catarrh, ulcer, and so on, are rare compared with those of gastro-enteric atony, paresis of the muscular fibres of the stomach and intestines, which constitute the bradypepsia so often confounded with it.

If one is unaware of this condition, or disregards it, it results that what was at first simply an indolent digestion becomes a painful one; there is gaseous distention, the partially digested food lies a long time in the colon, irritating the mucous lining, and gives rise to colic and the severe pain of flatulent distention. This pain is really confined to the transverse colon, but is referred by the patient to the stomach, and very often to the heart; and then, as the pain is often treated as if it were the source of the evil, a very simple case is mismanaged into one of chronic discomfort. Soda and opium are given, when nux vomica and aloes would have rectified the whole mischief.—Doctor Pascual, in *Revista de Ciencias Médicas.*

Sound Philosophy.—A short time ago, while conversing with a physician fresh from the halls of college, I amazed him by declaring that it was doubtful whether, outside of materia medica, there had been any real advance made in medicine for fifty years. Raising his hands in astonishment, he exclaimed: "Why, my dear sir, it was at least twenty years after that time when percussion and auscultation, as a means of diagnosing pulmonary diseases, were discovered." When informed that the great work of Laennec on auscultation had been in print *seventy years*, he seemed to be amazed.

In examining the long catalogue of new remedies, it is found many were in use and forgotten long years ago. Many were employed by Sydenham, and some, now esteemed very new, by Hippocrates; thus thapsia, a remedy of very recent date with us, was a favorite of "the Father of Medicine!"

Among the new remedies described and prescribed fifteen years ago, are Jamaica dogwood, guarana, berberis, ptelea, coca, Rhamnus, and many others. Indeed, it is wonderful to see how much valuable matter has been dropped in late medical works, and how much that is published as new may be found in the works of old authors.

A vast number of voluminous and costly medical works devoted to practical medicine are being continually issued from the press, but in no respect do they compare favorably with Copeland, Eberle, Watson, Stokes, Graves, and many more of olden times, in their ætiological, pathological or therapeutical dissertations.

That this declaration is not extravagant, is indicated by the single fact that Doctor Hartshorn, of Philadelphia, some two years ago collected statistics from Europe and America showing the results of the present treatment of pneumonia as compared with that recommended forty years ago. The results showed that the mortality under modern treatment is about thirty per cent., while that under the old *régime* was only about *eleven* per cent.

With all the boasted claims of the "advance thought" and the great improvements of medical men of to-day, I cannot find that we are now one step in advance of our fathers in the successful treatment of pneumonia, pleurisy, arachnitis, peritonitis, phthisis, bilious or typhoid fever.

Under the great light shed upon physiology and pathology by the patient and exhaustive experiments of Le Galois, Kaltenbruenner, Hunter, Brodie, Hall, Reid, Phillip, and others, medicine had attained a philosophical basis which well-nigh entitled it to be classed among the exact sciences. But under the lead of metaphysical, transcendental dreaming Germans who have usurped the leadership of our profession, the old landmarks have been torn down, long-established physiological laws are ignored, the compass and rudder of the old ship thrown away. To-day we are careering over unknown seas, on dangerous coasts, not knowing what is to be our fate.—Doctor L. B. Anderson, in *Southern Clinic.*

ON MOVABLE KIDNEY.—M. Courvoisier declares nephrectomy is too serious an operation to be undertaken except in extreme necessity. The procedure, advised first by Halin, of the fixation of the kidney to the lumbar muscles, he regards as an important step in surgical therapeutics. Attentive study of the literature of this operation gives two deaths out of sixty-one cases. Of the fifty-nine cases, thirty-nine were closely followed up; in twenty-nine the cure was complete, in nine a decided improvement took place, in three cases relapses occurred, and in six the symptoms remained unrelieved. These results seem sufficiently encouraging, and since last spring M. Courvoisier has done the operation seven times. In one case the movable kidney was complicated with pyo-nephrosis; the remaining six cases included one male and five females, of ages varying from twenty-three to forty-five years. In performing the operation, an incision is made ten centimeters in length, parallel to the border of the sacro-lumbar muscle, starting from the twelfth rib. The several layers being cut through, an assistant fixes the kidney in the wound by sutures in the adipose capsule. By preference, silk ligatures are employed, as catgut are too early absorbed; the wound is closed with iodoform gauze and left to granulate. The results of the operation are simple. In two cases, hæmaturia followed but soon subsided. With regard to results, the cases kept under observation six months showed the operation to have been perfectly successful.—*Le Progrès Médical.*

"THYROIDISM," GRAVES' DISEASE, AND HYSTERIA.—In a paper read before the Société Médicale des Hôpitaux, M. Béclère pointed out the relationship between "thyroidism," Graves' disease, and hysteria. He had recently treated a woman suffering from myxœdema with sheep's thyroid. She had, through a mistake at the outset of the treatment, taken as much as ninety-two grammes of thyroid gland within a period of eleven days. This excessive dose had been followed by symptoms now recognized as due to "thyroidism"—viz., tachycardia, irregularity of pulse, rise of temperature, insomnia, restlessness, polyuria, glycosuria, albuminuria, and incomplete paralysis, with sensation of heat and sweating. M. Béclère further noted an increased rate of respiration, transient tremor of arms, and exophthalmos. Hence arises the question whether these symptoms, which also characterize Basedow's (Graves') disease, may not be due in that affection to hypersecretion of the thyroid gland. It may be recalled that this was the question taken up by Professor Greenfield in his Bradshaw Lecture last year. Moreover, M. Béclère observed in the course of the treatment that the patient manifested some hysterical symptoms, such as transitory aphasia, monoplegia, and anæsthesia of the right arm; and he asks whether an excessive secretion of thyroid juice may not be one of the provocative agencies of hysteria.—*Gazette Médicale.*

REMOVAL OF TUMORS.—Doctor Roux, of Lausanne, removed an immense chondro-sarcoma of the iliac bone, disarticulating the whole bone after separating from all its muscular attachments. The bone was partially reproduced, and two years after the operation the patient was in good health and able to pursue his usual business. Doctor Thiriar, of Brussels, removed a fibro-lipoma of the cellular capsule of the kidney, weighing eleven kilogrammes. It was at first mistaken for an ovarian cyst, and laparotomy was followed by nephrectomy; recovery was rapid. Doctor Boutaresco, of Bucharest, removed a double cystic goitre, which was threatening suffocation behind the sternum—each half was removed separately at an interval of seven months; the patient was cured, although the retro-sternal portion was left.—*L'Union Médicale.*

EPITHELIOMA OF CLITORIS.—Doctor Edis exhibited to the British Gynæcological Society a specimen removed from an unmarried woman aged forty-three. Two years since she complained of severe irritation about the meatus urinarius, sometimes accompanied by pain on passing water, which, however, was not unduly frequent. During the last three weeks there had been a slight discharge from the growth. He removed it in its entirety by means of the Paquelin cautery, being careful to avoid touching the tissues that were implicated. The hæmorrhage was nothing to speak of. The wound was stuffed with iodoform gauze, and the patient made a good recovery.

THE PITUITARY BODY.—From recent experiments it is believed the function of the pituitary body is to produce a secretion of profound importance in the nutrition of the nervous and neuro-muscular systems. Further investigation, however, is demanded ere this conclusion can be accepted.

The Medical Age.

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Original Articles.

PHYSIOLOGICAL IMPORTANCE OF THE SYMPATHETIC NERVOUS SYSTEM.*

BY PROFESSOR A. VAN KOELLICKER.†

(*Concluded from page 713.*)

If now an attempt is made to indicate the tracts through which innervation of the vessels and of the smooth muscular systems is effected from the medulla oblongata, it is probable that the tracts run along in the lateral columns of the spinal cord, passing thence to the smaller cells of the anterior and lateral horns of the gray substance, whence emanate the fine fibres of the motoric roots. These fibres were found by Gaskell and Langley in all the motoric roots of mammals, and they send out communicating ramifications to the sympathetic (to the second thoracic, fourth lumbar, and second and third sacral nerves). These motoric-sympathetic cells of the spinal cord, as they may be termed, may be clearly distinguished from the motoric voluntary cells which participate in the voluntary movements, and certainly are not within the power of the pyramidal tracts and of the will. How far the Lenhossek fibres of the chicken, emanating from the anterior horns and passing through the sensory roots, play a rôle in the motoric functions of the sympathetic or of the smooth muscular systems, remains yet to be determined.

We do not yet know what parts of the lateral columns are involved in these vaso- and viscero-motoric tracts, but this much is now clear: under certain circumstances — especially when stimuli issue from the brain—a number of intermediate fibres assume a rôle. It is likewise certain that in the above-mentioned reflex phenomena in the domain of the sympathetic, various portions of the spinal cord and of the medulla oblongata enter into play.

With respect now to the method of the action of the nervous system on the vessels and the smooth muscular systems, in detail, the newer physiology holds that it varies according to circumstances—is indeed two-fold. In the one kind of cases the nerves are held to produce contractions of the vessels and intestines; in the others they expand the vessels and bring the intestines to a standstill; and for each function special nerves are put into play. Thus, little by little, a complicated hypothesis has been evolved, which on close examination is found to present many weak and perplexing aspects.

Going more thoroughly into the question, we find at the outset that the relations of the heart are deemed of paramount importance. This organ is provided with nerves from two sides—by the pneumogastric and, secondly, by the sympathetic border-cord of the throat and, in part, of the thoracic cavity. When the first nerve is experimentally irritated, it suspends the action of the heart, which stands still in diastole; it is accordingly a dilating and inhibitory nerve. On the other hand, the sympathetic plexuses of the heart accelerate its action, thus acting like constrictors or accelerators. What is generally regarded as true of the heart, is equally applicable to the vessels, particularly as the simplest observations show that the one class of factors cause contraction of the vessels, while others expand and in a measure paralyze them. From new and direct observations of the vessels was evolved the theory of the existence of two classes of vascular nerves, exerting an opposite action on the muscular system of the vessels, and being termed vaso-constrictors and vaso-dilators. The first observation of nerves effecting vascular expansion was made in the year 1858 by the celebrated French

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†Privy Medical Councilor.

physiologist Claude Bernard, who showed that irritation of the *chorda tympani*, a nerve in the service of the submaxillary gland, produces not alone an increased secretion of saliva, but also expands the vessels of the gland, whereas the sympathetic branches of the gland are vaso-constrictors and contract the glandular vessels. The same is found true of the parotid gland, which is served by the *ramus tympanicus* of the *glosso-pharyngeus* as a vaso-dilator nerve.

Vessel-expanding action has been observed on irritating the nerves of both extremities, accompanied also with the reverse phenomena, so that it seemed fair to assume that the trunks of these nerves contained both kinds of nerve-fibres. The blood-vessels of the intestine are also expanded by irritating the large intestinal nerves, and, according to the latest reports of Cannes and Gley, expansion occurred in the lacteals (the *cisterna chyli* of the dog). But the greatest interest has been aroused by the experiments of Eckhardt, who declared the congestion of the *corpora cavernosa* of the sexual organs is conditioned by dilatation of their vessels and (as I am prompted to add by my own experiments) by relaxing the muscles of their venous blood-spaces under the influence of certain sympathetic nerves which he named *nervi erigentes;* in contradistinction to the latter, other nerves —the *nervi pudendi*— were found, to contract the above-mentioned muscular apparatus. With respect to the intestinal movements, the splanchnic was found to be inhibitory, as also the vagus; by others the splanchnic was found to be the nerve effecting contractions.

Reviewing all these facts, and others not mentioned here, it will hardly seem possible to doubt the existence of vessel-dilating and viscero-inhibiting nerves, by the side of other nerves with opposite function. But it is quite a different question whether these and the vaso-constrictors represent two distinct kinds of nerves, or whether one and the same nerve is capable of exerting at times one action and at times another; this remark does not apply to the heart, to the salivary glands, nor to the *nervi erigentes* (for in these cases two kinds of nerves are shown to exist in the respective organs), but to the ordinary nerves of the vessels of the extremities. In these vessels no one has thus far found two kinds of nerves, nor are we aware of any other contrivances such as microscopic ganglia on which special effects or phenomena might be conditioned. For the present, therefore, it seems fair to assume that in these cases one and the same nerve element effects contraction and relaxation of the vascular muscles.

I shall not omit to emphasize the fact that nerve-cells and microscopic ganglia, if not present in the vessels of the extremities, have yet been found in the vessels of other places —by Geberg, for example, in the vessels of the iris of birds. It is possible that many of the microscopic ganglia of the tongue, lungs, intestinal wall, kidneys, supra-renal capsules, bladder, and ureter, reveal the same relations.

Assuming that amid ordinary conditions in life the vessels present a certain degree of medium contraction, to which the name "tone" has been applied, and this tone being conditioned by the physiological state of the ganglionic cells which send their fibres directly or indirectly into the vascular walls, —this state of contraction might suffer an increase or diminution, according as the labor of the nerve-cells increases or diminishes. To assume a diminution or a cessation of the labor performed by a motoric fibre, thus relaxing the muscles involved, certainly appears very unusual when it is considered that this cessation in the instances of which we speak supervenes as the result of the irritation of a nerve-fibre or of an involuntary influence from the brain or spinal cord. But such a theory is not impossible, and the example of the mollusks has been justly cited. All mollusks possess one or two scale-muscles which by their contraction voluntarily close the shell; on the other hand, they voluntarily open the shell through relaxation, in which process, as Pawlow showed experimentally, certain nerve-tracts are brought into play, without participation of the nerve-cells. The same is observed in the mussel-crabs, and these facts seem to me sufficient to indicate the possibility that in higher creatures nerve-fibres may be capable of effecting in some cases relaxation, in others contraction, of the muscular fibres.

With the vagus and the heart the relations seem to differ, inasmuch as this nerve never

contracts but always relaxes the heart-muscle; how this occurs is as yet an open question. In 1862 I thought I had found many vagus fibres simply intersect the cardiac ganglia without forming connections with their cells, and passing directly to the heart-muscle; this theory, if true, would lead to the remarkable, if not impossible, assumption that the vagus exerts a direct paralyzing influence on the fibres of the heart-muscle. On the other hand, later writers assert that the vagus fibres terminate in the cells of the heart-ganglia and through the fibres of the latter exert a relaxing action on the muscular fibres. If that were so, we should have to assume the presence of two kinds of ganglionic fibres in the heart — inhibiting and contracting,—and the first kind would remain as enigmatical as in my hypothesis. With respect to the *nervi erigentes* of the *corpora cavernosa*, the theory of their direct relaxant action seems to be the only possible one thus far offered; whereas with the *chorda tympani* and its vaso-dilator influence over the vessels of the salivary glands, if we accept the classic researches of Bidder, there is but one possibility: that the *chorda tympani* exerts its power by acting on the ganglionic fibres of the submaxillary plexus.

Let us now follow a step farther the relations of the heart: of all the organs acted on by the sympathetic, it has always caused the physiologist the greatest trouble. This organ is distinguished from all involuntary motoric parts of the body by the automatic character and peculiar rhythm of its movements. The only things which are in a measure comparable with the heart are the lymph hearts of the amphibiæ and (in the domain of the cerebro-spinal nervous system) the movements of respiration.

After having long placed the cause of the heart's activity in its nervous apparatus, there is now a steady growth in the number of those (Gaskell, Engelmann, Krehl and Romberg, His Jr.) who ascribe to the heart-muscle itself the capacity of contracting and executing rhythmic movements, automatically and independently of its nerves.

As it is not possible to discuss at length this very important but also very comprehensive question, I limit myself to the following essential points:

As was shown by Carl Vogt and myself years ago, the heart of embryos pulsates regularly before it possesses muscular fibres, and naturally also, as was shown by His Jr., before nerves in their growth have penetrated it. From this fact we must inevitably infer that a tube or canal formed of simple embryonic cells is capable of performing automatic and rhythmic movements; on the other hand it is not permissible to infer that the heart of adults, provided, with ganglia and nerves, is not subject to, the influence of its nerves. Apart from the embryonic heart, automatic and even rhythmic movements are manifested by other simple elementary parts, such as the eyelashes, the spermatazoa, the contractile vacuoles of infusoriæ; and the so-called voluntary movements of the protozoa, which have no muscles or nerves, afford even a more striking proof of what simple elementary parts are capable of doing:

Developed muscular fibres are also, under certain circumstances, made capable of rhythmic movements; by chemical irritation of the heart-apex Langendorff has proved this beyond question. How far such movements occur amid other conditions, and whether, as Engelmann assumes, smooth muscular cells are capable of imparting to one another their state of excitation without the intervention of nerves, will have to be the subject of further investigation. I would simply remark that even if, as has been asserted, the ureter is alone nerveless, thus far we have no right to say that all smooth muscles possess nerves; at this point I would simply recall the uncommonly muscular vessels of the umbilical cord and of the fœtal placenta. Motions communicated from muscular cell to muscular cell have also been taken up by the heart:

All sections of the heart containing ganglia, such as the vestibules and chamber-bases, display automatic and rhythmic movements, not only in the frog but also in mammalia; in the other sections, as for example at the heart-apex, movements are never observed save when specially provoked:

Summarizing the whole, I assert that all the apparatuses which move automatically and rhythmically—the muscles of respiration, the blood-heart and the lymph-hearts—stand foremost under the influence of the nervous

system in the adult creature, depending upon it essentially in life; this assertion, of course, includes no reference to the final causes of the function of the nervous apparatuses in question. To the heart-ganglia I ascribe the power of provoking to automatic and rhythmic activity the auricles as well as the chambers; and for the present I see no ground for assuming a substantial difference between the ganglia of the vestibules and those of the chambers. In how far independent movements of the muscular fibres, not provoked by the nerves, play a part in the heart's activity, is a question which is suggested by the fruits of the latest investigations, but one which cannot be definitely answered for the present.

I am approaching the end of my exposition, and would now only glance at a series of difficult questions, among which the most important is: Whether sensory functions and contrivances for acting on the processes of nutrition and secretion are to be ascribed to the really sympathetic fibres?

The question respecting the presence of sensory fibres emanating from the sympathetic ganglia is covered by the other—whether the sympathetic ganglia alone are capable of producing reflexes.

Ever since the experiments of Bernard, such a function has been ascribed by a number of investigators to the submaxillary ganglion; and it is not to be denied that especially the comprehensive researches of Bidder (1868–9) support the possibility of such a contrivance or arrangement. Bidder first showed that the fibres of the *chorda tympani* connected with the submaxillary gland do not pass directly to this gland, but rather terminate in the ganglion mentioned; and it is only from the ganglionic cells that the real glandular nerves emanate. He further showed that, aside from these branches which pass from the central part of the lingual nerve to the submaxillary ganglion, other branches from the peripheric part of this nerve also penetrate the ganglion, and these latter branches he terms peripheric roots of the submaxillary ganglion. If what Bernard states now be true, that after intersecting the trunk of the lingual nerve above the issue of the glandular nerves, irritation of these nerves below the ganglion continues to cause secretion of saliva, reflex action of the ganglion would thus be established. It must be stated, however, that Bidder in his very careful experiments was unable to corroborate the statements of Bernard. The most striking experiments in this respect were those in which Bidder was enabled to eliminate the action of the chorda by atrophying its fibres through previous intersection of the lingual trunk; in this case, irritation of the peripheric lingual portion never provoked secretion. Singular was also the negative result produced by direct irritation of the submaxillary ganglion and the gland itself; whence Bidder concludes that the ganglionic cells and fibres exert their action only when stimulated by the fibres of the chorda.

As supporting the theory of a reflex function of the sympathetic ganglia, the fact is further adduced that a quiescent heart is completely contracted by local irritation; and in the latter case any communication of the irritation or stimulus is scarcely to be thought of, save as effected through the centripetal nerve-fibres. Similar processes might occur with other ganglia—for example, with those of the intestinal wall, in the *ganglion mesentericum inferius* (here compare the reports of Langley, *Journal of Physiology*, vol. xv), and others; and to explain them it would be necessary to assume, in accordance with other well known facts, the following anatomical arrangement: Peripherally situated, multipolar sympathetic cells would take up the stimulus through one of their offshoots and communicate it through other continuations either directly to the muscles or first to other cells which, in their turn, reach the muscular elements only through their axes-cylinders.

Thus, for example, cells of Meissner's plexus with superficial offshoots in the intestinal villi might be able to receive certain stimuli, and with other offshoots exert action on the muscle fibres of the villi or of the *muscularis mucosa*. In such a most simple contingency, even a simple multipolar cell would constitute a complete reflex apparatus—an assumption which, in view of the abovementioned peculiar structure of the cells of the intestinal ganglia, appears not impossible.

If this were so, we should perhaps have to distinguish between two kinds of sympathetic

nerve-cells—sensory and motoric; and we might further, as in the spinal cord and brain, assume the presence of several systems of each; in other words, there may exist a sensory conduction apparatus, consisting of various neurodendræ extending through a chain of ganglia, and likewise the motoric apparatuses; and it would be conceivable that in each of these ganglia reflexes might occur, provided that at the sensory axes-cylinders collaterals were everywhere found, as indeed they were observed by Ramon, Gehuchten, and myself, in Golgi preparations.

To the foregoing I would simply add that in case the submaxillary ganglion should really prove to be a reflex apparatus, the only possible explanation would be that the fibres of the peripheric lingual roots of the ganglion, acting as conductors, emanate from the cells of the microscopic ganglia which Remak and I found years ago in the lingual branches of the *lingualis* and also of the *glosso-pharyngeus*, which cells have recently been proved to be multipolar sympathetic cells by the investigations of Lenhossek.

With respect to the influence of the sympathetic on the secretions and processes of nutrition, we must first emphasize the fact that recent investigations have positively shown that very many glands and glandular organs, first of all the salivary glands, the pancreas, Brunner's, and Lieberkuhn's glands, the thyroid gland, the supra-renal capsules, the sweat-glands, and others, possess a large number of fine nerve-anastomoses about their elements. It is further clear that the fluctuating state of the vessels depending upon the nerves, their varying expansion and contraction, is based upon the great control exerted over the quantity of the transudating blood, hence is the measure of the liquids to be secreted and of the nourishing liquid in the tissues. Apart from these factors, there are plainly manifested under the influence of the nerves—as Ludwig especially, and the experiments of his pupils with the saliva, have shown—peculiar performances of the glandular cells, which, though not yet closely studied, may yet be regarded as substantially chemical in character, and make clear a direct relation of the nerves to the formation of the glandular products. To this extent we are now permitted to speak of nerves of secretion, but we have yet no proof that they are different from the vaso-motoric nerves, particularly from the vessel-expanding nerves.

The further investigation of these obscure processes will doubtless bring more light; already we have the important experiments of Morat and Dufour, which teach us that also the formation of sugar in the liver stands under the influence of the nervous system (*Arch. de Phys. Norm. et Patholog.*, 1894, No. 3).

On the other hand, we have also glands to the nerves of which scarcely any other than a vaso-motoric function can be ascribed: such are those which, like the tear-glands and kidneys, yield products which partake more of the simple transudate. With certain glands, such as the sweat-glands, yet another factor would have to be taken into account—that their walls without exception possess muscles, some of them in abundance.

I would briefly recapitulate the chief principles of my exposition:

1. The sympathetic nervous system is in part independent of the remainder of the nervous system, and is in part intimately bound up therewith.

2. It goes without saying that it is dependent through its ganglia, from all of which issue fine nerve-fibres which are in part marrowless; dependent through the fibres of the cerebral and spinal-cord nerves which invade the sympathetic domain in the connective branches.

3. These cerebro-spinal elements of the sympathetic are in part sensory and occasion the slightly conscious sensations which reach us from the intestines; in another part they are motoric and communicate indirectly stimuli from the brain and spinal cord by action on the sympathetic ganglia, on all sections with involuntary muscular systems, and on the glands.

4. The ganglionic fibres of the sympathetic are undoubtedly for the most part motoric, and innervate all the smooth muscular systems of the body directly, producing their moderate slight contraction or tone, or else provoking an involuntary and more pronounced contraction of the muscular system; creating, thirdly, in certain cases (vessels, intestinal wall), a relaxation thereof.

5. It is not improbable that among the sympathetic fibres sensory fibres are also present, which play their own part in reflexes occurring within the sphere of the sympathetic.

6. We may further consider it as almost certain that the sympathetic nerve-fibres exert an important influence on the chemism of certain glands.

7. The mutual relations of the cerebro-spinal system and sympathetic are not alone direct but also indirect, since stimulation of cerebro-spinal sensory fibres provokes reflexes in the sphere of the sympathetic, and since, per contra, such reflexes may be caused by the intestines in the cerebro-spinal sphere.

8. With respect to the mutual behavior and relations of the elements, the sympathetic reveals the same relations as the cerebro-spinal system. In both cases the elements consist of microscopic unities—the nerve-treelets—each of which consists of one nerve-cell and nerve-fibres. In the one category of cases the cells are provided with a far-reaching nervous continuation, are unipolar; in the other, with many such, hence are multipolar, one of the latter being a long, so-called nervous continuation, the others being short—dendritæ.

9. All continuations of the nerve-cells are, physiologically considered, conduction apparatuses, of which the dendritæ are cellulipetal (conducting toward) and the long continuations cellulifugal (conducting from). All these continuations terminate with more or less numerous anastomoses, and act on the cellular substance and on one another only through contact, not through merging or fusion.

10. The motoric nerve-fibres also, which issue from the cerebro-spinal nerves and pass into the sympathetic ganglia, end in the latter with free ramifications and act only by contact on the sympathetic ganglionic cells.

Thus the entire sympathetic nervous system presents the appearance of a many-linked chain of touching and interwoven motoric (and perhaps also sensory) units which, in the first place, proceed from the cerebro-spinal nerves; looked upon from a higher view-point, it may be regarded simply as a branch of the cerebro-spinal system, since the latter is also composed of many units or nerve-treelets acting psychically and somatically, centrifugally and centripetally.

I trust I have succeeded in giving a glimpse into one of the most obscure spheres of the nervous system, and in arousing interest in this branch of biology.

Vienna, Austria.

EARLY OPERATIONS FOR CANCERS AND TUMORS.

BY THEODORE A. M'GRAW, M.D.

The frequent occurrence of cases of malignant disease in which the surgeon has not been consulted until the time has passed by in which surgical aid could be effectively rendered, indicates a neglect on the part either of the patient or his medical adviser, which is fraught with disaster.

The responsibility in very many cases must rest with the patient himself, who, through dread of operation, careless indifference, or disbelief in surgical skill, conceals his malady until it has reached an incurable stage. For such persons there is no hope. They yield the fight without a struggle, and no one can render aid when no one is made aware of the danger.

When, however, a patient, who becomes conscious of a lump or ulcer which excites his alarm, consults his family physician and is lulled into a false security by the professional advice that he should cease to worry about a matter which he is assured is of no consequence, and is thereby induced to postpone active measures until the case has become hopeless, the blame for the delay and for all of the evil which it causes must rest upon the physician. The number of cases in which this happens is uufortunately great, and the practical surgeon is constantly astonished at meeting patients who have been counseled by their physicians to courses of inactivity in the treatment of this most horrible of all diseases.

The explanation of this attitude on the part of the profession is twofold. There is, first of all, a skepticism in the profession itself as well as among the laity as to the value of operative measures in the treatment of these disorders. This skepticism is in part the result of an inherited experience, which dates from the not very distant time

when no operations for malignant tumors were made with sufficient thoroughness. It is to some extent justified by the great number of cases in which even now, in spite of all care and thoroughness on the part of the operator, recurrence and death follow the operations.

The reason for this lies in the fact, however, that most cases do not come to the surgeon until an infection more or less general has taken place. There results a curious vicious circle: The family physician delays sending his cases to the surgeon until operations must be of doubtful value, and then, because the disease is not eradicated by the operation, becomes imbued with a distrust of operative measures—which influences him in his next cases to still further delay the resort to surgery.

In truth, of late years facts are accumulating which show decidedly the value of operations, properly conducted, in curing both cancer and sarcoma, and it may be hoped that as both profession and laity become better educated, and operations are undertaken at an earlier period and are done with a more complete technique, the record of successes will constantly grow in proportion. As yet the profession as a whole do not seem to have kept pace with the progress of surgery in this direction. This is shown not only by their apathy in respect to an insistence upon early operations, but also by the frequency with which incomplete and therefore reprehensible operations are performed by incompetent men: for it is still a common thing to meet patients whose breasts have been removed for scirrhus while the lymphatics in the axilla were left untouched, or whose lips have been cut off for epithelioma without the surgeon thinking it worth while to examine the glands under the chin and jaw.

These things could never happen if the operators had even a slight conception of the duties now required of an operating surgeon.

In the *Medical Record** Doctor B. Farquhar Curtis published a paper on the cure of cancer by operation, which could be read with profit by the whole profession; some errors were made in the figures, which require correcting, but they do not vitiate the correctness of the general conclusion that a considerable minority of cases of cancer and sarcoma are cured by operative measures, and that in many more life is prolonged. Every practical surgeon of large experience can recall cases of the absolute cure of cancers and sarcoma by the knife. I myself have had many such. The epithelial cancers of the lip and face are usually curable by early operation; if, however, they are allowed to run until the glands become enlarged, recurrence is apt to take place in spite of most careful and thorough extirpation. Scirrhus of the breast is often cured by operation. I have one patient living in Detroit free from disease, whose breast I removed over eight years ago for undoubted scirrhus. Another, whom I operated upon in conjunction with Doctor Voorheis, of Coldwater, some years ago, is now living and well. Another patient, whose breast I removed for soft carcinoma, died five years afterwards of acute pneumonia, never having had any recurrence of the disorder. Still another, both of whose breasts had been removed thirty years before, one after the other at intervals of two years, by the late Doctor G. M. Clark, came to me on account of a fatty tumor of the elbow, which I extirpated. She described one of the mammary tumors as black. It was probably a melanotic sarcoma, and yet there had been no recurrence. I amputated at the hip-joint in a man many years ago for a recurrent sarcoma of the thigh, and afterwards made two operations on the stump for new growths. I kept track of him for more than twelve years after the last operation, and during that time he remained free from the disease.

There can be no doubt whatever that in all varieties of sarcoma and cancer thorough operations are not infrequently followed by radical cures, and that the number of these cases could be enormously increased if it were possible for the surgeon to get control of them in the first stage. The practitioner, therefore, is not justified in leaving his patient to his fate, or, what amounts to the same thing, in making light of the trouble and postponing active measures until all treatment has become useless.

The other factor which has to do with the undue delay in bringing these patients to the surgeon, is the uncertainty of diagnosis. The

* February 24th.

specialist is apt perhaps to underrate the difficulties in diagnosis which are experienced by the general practitioner. However that may be, it is the general experience of surgeons in large practice to see almost daily cases of malignant disease in the advanced, incurable stage, in which the attending physicians even at the last have not been able to come to positive convictions in respect to the diagnosis. Cancers of the breast in which the disease has involved the supra-clavicular glands; of anus and rectum in which the lower segment of the gut has been nearly destroyed; and of the uterus in which the cervix has been entirely eaten away, the vaginal vault ulcerated, and the broad ligaments infiltrated with cancerous growths, are sent to medical centres for the purpose of getting a diagnosis.

It may not, therefore, seem unnecessary to discuss at this time the questions connected with the diagnosis of malignant disease and, what is almost of equal importance, the relations of these disorders to tumefactions and ulcers which may be mistaken for them.

The very first and most important point in diagnosis, indeed, is to determine whether the patient has a tumor at all or something that simulates a tumor. As a matter of convenience I am accustomed to speak to my students of true tumors, or neoplasms, and false tumors, or swellings and ulcers which are liable to be mistaken for neoplasms. Now while this distinction in practice is of great practical moment, it is often of no importance whatever as regards treatment whether a certain neoplasm is a cancer or sarcoma or fibrous or fatty tumor. A true tumor of any kind is a parasite which ought to be removed whenever discovered, unless there are grave objections to the operation as an operation. If, for instance, a woman has a tumor of the womb, it may be of vast importance to determine whether it is a malignant tumor or an innocent tumor, for the operation for its removal may necessitate a hysterectomy which would endanger the patient's life. So, too, if a patient suffering from Bright's disease or diabetes had a tumor, we might decide the question of operation by our convictions or fears as to the character of the neoplasm, for such constitutional maladies often render the prognosis of even slight operations much more grave than with healthy persons. But if an otherwise sound person has a new growth in the abdominal wall, the thigh, or the arm, it should be extirpated whatever its nature, because such operations on small tumors are rarely dangerous, and the tumors themselves, even though innocent, may cause an infinite deal of trouble by their size and by the pressure which they exert on important organs. I have, for instance, had a number of cases of neuralgia, caused by the pressure of fatty tumors; and that it is not a matter of indifference when such tumors are removed, is illustrated by the fact that in no one of these cases has the extirpation of the tumor given immediate relief from pain. In one case it was a year before the affected nerves regained their normal tone. For the most part, therefore, physicians who debate over the nature of undoubted neoplasms before proceeding to treatment simply waste their time. The rule should be made invariable to operate on all neoplasms as soon as discovered, unless there are positive contra-indications; only then should the medical attendant allow the question of the histological character to decide his course.

As regards the pre-operative diagnosis of the malignancy or innocency of a given tumor, it is often in just those cases in which that knowledge is most essential that it is exceedingly difficult or even impossible to obtain. In the first place, there are no tumors which are always and invariably innocent. If you examine a given tumor under the microscope and find it composed of the most pronounced fibrous tissue, you may not say absolutely that there is no danger of its recurrence. Even the fatty tumor, of all neoplasms the most inert, will occasionally show malignant tendencies.

This fact, in itself, renders the histological evidences as regards the character of given tumors somewhat untrustworthy.

Without disparaging in the slightest degree the labors of those men who have done so much by study with the microscope to enlarge our pathological horizon, I wish to express my conviction that such histological examinations as are made from fragments of tissue secured from the living tumor are rarely entitled to much weight in forming a diagnosis. I say living tumors, because it is

a very different thing to examine a tumor after its extirpation in a pathological laboratory, and to determine its nature from scrapings from its surface or minute fragments snipped off from such portions as may chance to be accessible. I am convinced that surgeons who allow themselves to be guided rather by such histological investigations than by clinical symptoms are liable to make gross errors. I have myself seen a uterus removed for alleged malignant disease when I could see no evidences of cancer; and only recently I was called in consultation in a case in which the diagnosis of cancer had been made from a microscopical examination, but in which the clinical evidences showed merely the glandular hyperplasia consequent upon a lacerated cervix. Doctor Longyear, who was in attendance, operated for the laceration, and the woman made a good recovery.

A notable example of failure in this direction was afforded during the illness of the late Emperor Frederick. I do not suppose that any practical surgeon who read the accounts of the case as published in the newspapers had any doubt in regard to the malignancy of the disease at a time when the most renowned expert in Europe could find no histological evidences of cancer in the examination of fragments pinched from the surface of the tumor. In the very nature of things such investigations must yield very uncertain results, for accurate histological diagnosis can be made only from a careful study of the structure of a tumor, and for this, minute fragments of tissue cut at random from a projecting surface are not adapted. After a tumor is extirpated and the whole morbid mass is at the service of the investigator, when sections may be made throughout its entire structure and all of its relations studied, then indeed we may receive from its histological study most important information; but our decisions in respect to operative procedures have to be made before such a study is possible. It is upon clinical evidences, then, that the surgeon must for the most part rely to guide him in his therapeutic procedures. It is, however, impossible to formulate any general rules of semeiology which will meet all cases; there are no symptoms of malignancy except those caused by the spread of the infection. The rapid growth, the multiple tumors in unlike tissues, the glandular infection, the final ulcerations and cachexia, are all to be seen, but only when the trouble has reached a stage when its nature is no longer doubtful. What the practitioner urgently needs is a guide to the first stages of the malady.

A woman discovers a lump in the breast. There are no evidences as yet of infection, and it may not change materially in months. Is it cancer? Does it demand prompt action, or may we let it alone? Another has an ulcerated cervix. Should we extirpate the uterus, or scrape it away and sew up the lacerated os? A scabby sore persists on a man's hand. Is it dangerous? These are the questions which constantly perplex the practitioner. Now the key to our therapeutics in these cases must be found in a careful study and accurate knowledge of the relations which malignant diseases have to other tumors and other pathological processes.

I have said that all kinds of tumors may show malignant tendencies. I might add that innocent tumors are exceedingly liable to become the seats of cancer and sarcoma. The uterine fibroid is apt to develop a sarcoma; the adenoma of the breast or rectum becomes a cancer; the mole may grow into a most malignant melanotic sarcoma. Of all dangerous things when irritated, the common mole is the worst. We are all familiar with the dark patches of which some people, and especially brunettes, have so many. We all know that in general they are the most innocent of morbid growths, and yet I have come to regard them as the veriest magazines of organic gunpowder. If you apply the match it will destroy the organism. One young man who came to my clinic had a mole on the back of his neck. It was irritated by the band of his shirt and grew rapidly into a tumor, which I extirpated. It, however, recurred before the wound could heal, and in three months he was dead. Another had one on the forearm, and a physician applied a caustic. A tumor grew rapidly on the spot, for which I amputated at the shoulder, but it speedily recurred and was soon followed by death. During this last winter, a lady who had a large mole over the sternum became pregnant. During her pregnancy the mole became irritated by the corset steel, and a

melanotic tumor formed in the neighboring breast, which increased rapidly during lactation. I operated on her when her baby was three weeks old, and removed the mole and the breast and a multitude of melanotic glands in the axilla.

Beware, then, of irritating a mole. Never touch one with a light caustic. If it should seem desirable to destroy them with an escharotic, use one that acts quickly and deeply like caustic potash. But if consulted in regard to an inflamed mole, act with decision and promptitude. The quick excision may save your patient from a horrible fate.

If the relations of innocent to malignant neoplasms demand careful study, those of false tumors to cancers and sarcomas are even more complicated. The false tumors which simulate neoplasms are almost too numerous to mention. They consist of inflammations, ulcerations, and abscesses, of extravasations of blood, of hernias, of collections of fluids in preformed cavities or in the interstices of connective tissues, of accumulations of secretions in obstructed ducts, of anomalies of development, and even of normal conditions like the pregnant uterus. The deposits of infectious disorders like syphilis and tubercle, the growths of parasites like the fungus of actinomycosis, or like the echinococcus, even hypertrophies like overgrown bony tuberosities, may all be mistaken for true tumors. Nor is the diagnosis in all cases easy or even possible. The pathological conditions resulting from inflammations and from syphilis are especially misleading. The difficulty too is enormously increased by the transformations which these irritative conditions not infrequently undergo as the affected structures become the seat of cancer. This tendency of irritated tissues is too well known to require extended mention. The pressure of a pipe upon the lip, the irritation of the cheek by a sharp tooth, the presence of soot in the scrotum, the long-continued dyspepsia, the chronic syphilitic ulcers, the lacerated cervix, are a few examples which illustrate that innumerable array of cases in which irritation more or less chronic has preceded the development of malignant disease. It is of course impossible to establish general rules for diagnosis when the conditions are so infinitely varied. Every case of doubt must be regarded as a problem in itself. Every locality of the body has its peculiar tendencies which have to be studied, and every age its own peculiar maladies. In the leg, for example, it is comparatively rare for cancer to develop, although it is more frequently the seat of prolonged irritations than any other organ of the body, while the lip and os uteri and anus are exceedingly vulnerable. It becomes necessary therefore, in order to judge with anything like precision of any given case, to thoroughly study the character of the region and organ involved, to ascertain the diseases to which it is subject, and to take into consideration the age and sex of the individual and the whole history of the case. While space and time will not allow me to go in detail into a discussion of the points in diagnosis as they concern all parts of the body and all the various tumefactions and ulcers, the consideration, nevertheless, of some of the phenomena which determine the diagnosis in certain localities may afford profitable illustrations of the whole subject.

On the top of the head and on the face and neck we meet very frequently with congenital angeiomata. These rarely remain stationary. They either disappear soon after birth, or else increase rapidly in size. When small they are easily destroyed by a sharp escharotic or by excision. In old age they frequently become the seats of cancer. It is not creditable for medical men, as often happens, to allow them to attain a size at which extirpation becomes dangerous if not impossible. There can be no difficulty in their diagnosis except in those rare cases in which they are altogether subcutaneous and cause no discoloration of the skin; they are then to be diagnosed by their occurrence as congenital tumors which, easily perceived by the eye, are difficult to detect by the touch. They disappear on pressure, and reappear when the pressure is removed.

The common malignant growths of the face and mouth are the epitheliomata. Beginning with a proliferation of epithelium or epidermis, they become malignant whenever the underlying tissues lose their powers of resistance. The faces of old people are frequently covered with scabby growths of this kind, but as the corium is exceedingly resistant, years will often pass away before it becomes

infiltrated. For this reason, too, the application of a light caustic will frequently destroy the diseased epidermis and cure the disorder. In the lip, on the contrary, the submucous tissues have very little power of resistance, and a few months will generally bring the epithelial growth into full maturity as an infectious cancer. Caustics used on the lip frequently stimulate the imbedded germs into activity, and cases which had previously been latent will then make fearful progress. Labial cancers should therefore never be treated by caustics, but always by excision. The tongue is even more vulnerable than the lip, and the progress of infection is usually exceedingly rapid, so that a lingual cancer at the end of a few weeks may have arrived at the hopeless stage. The same is true of cancers of the cheek, pharynx, and œsophagus. Now the diagnosis of these epitheliomata has to be made from lupus and syphilitic affections. The age of first attack will usually distinguish lupus, for it occurs commonly in young people.

The hard chancre is, in my experience, very frequently mistaken for cancer. To the experienced surgeon, however, there is little difficulty in diagnosis. The quick onset, circular form, hard edge and speedy glandular involvement of a hard chancre is very different from the slow onset, irregular form, nodular inclination and late glandular involvement of an epithelioma. The one begins and attains its maximum in a few weeks. The other requires many months. Syphilitic tubercle may be distinguished by its color and peculiar form of eruption. The hard nodules often occur multiple and are apt to spread in a serpiginous form. On the tongue, syphilis rarely occurs in so circumscribed a form as cancer, unless indeed it comes as a primary sore. Secondary and tertiary forms of the disease commonly involve the whole surface, or at any rate develop in several foci, while cancer comes as a rule singly. The occurrence of cancer, however, in old syphilitic ulcers of the tongue, is very common. I once had a patient, quite a young man, who died of cancer of the tongue, recurring after extirpation, secondary to a prolonged syphilitic inflammation.

When cancer begins on the tongue independent of other affections, it occurs either as a nodule or as an ulcer. Aside from syphilis, it has to be differentiated from tubercular ulcers. These, however, rarely appear independent of tuberculosis elsewhere—there is either tuberculosis of the lungs or of the larynx or pharynx,—and can thus be distinguished from the more solitary ulcers of cancer. In the tongue and mouth, cancer runs its course with frightful rapidity, and the surgeon cannot be too quick with the knife. If any man hesitates because of doubt, let him remember that by excision he may cure not only cancer but almost every affection which may be mistaken for cancer.

The eyelids are subject to a rodent ulcer which is terribly destructive. Beginning as a small induration, it spreads over the whole lid, and gradually involves the whole orbit and face. I firmly believe that we fail in curing this trouble from timidity.

A lady came to me several years ago for a recurrent nodule on the lower lid. The surgeon who first treated her had merely snipped off the projecting growth with a pair of scissors. I excised first half of the lid, subsequently the whole lid, then I took out the eye and cleaned out the orbit, but before she died it had crossed the nose and attacked the other eye. It is possible that the early excision of the whole lid might have stopped the trouble. The eyelids are also subject to moles which easily become malignant. They are hard to protect from irritation, and should be invariably excised.

Cancers of the breast usually attain the second stage of their existence before they are detected at all. Hidden in the depths of the gland where they are withdrawn from observation, they are commonly discovered accidentally only when they have reached an advanced age. At that time the axillary glands have already become affected, and no operation can be curative in which the glands and fat of the axillary space are not thoroughly removed. These cases, then, are urgent when first discovered, and it becomes necessary to determine the nature of them, if doubt exists, at once. Unfortunately this is what few physicians do. The practitioner almost invariably postpones action as long as the anxiety of the patient will permit him. Now in young persons the only malignant tumor is

the sarcoma, a soft tumor of rapid growth which could be mistaken only for abscesses or possibly tubercular deposits. In young nursing women, however, they may be confounded with obstruction of ducts and milky cysts. In most cases the exploring needle will solve all doubt, for if a young woman has a soft lump in her breast, which in two or three months has grown to be as big as a walnut, and which contains neither milk nor pus, it is in the vast majority of cases the most malignant of all diseases, a round- or spindle-celled sarcoma. Hard, slowly growing lumps in the breasts of young women are either fibroids or adenomata, and in either case should be removed, for though not immediately dangerous they may finally become so or may grow to be of large size. In older women, hard lumps in the breast in by far the greater number of cases mean the existence of scirrhus cancer. Almost the only diseases with which this may be confounded are chronic inflammations and cysts. The chronic mastitis usually involves the whole gland, at any rate a whole lobule, and is not as circumscribed as schirrus; you do not feel one or more isolated lumps, but a whole segment of the breast has a uniform hardness, and with this there is an absence of glandular enlargement such as would invariably accompany scirrhus of that size. The cysts which occur at change of life are due to the collection of a dark fluid in the mammary ducts. They are sometimes of stony hardness, but may usually be distinguished by their rounder form and more sharply defined contour. When punctured with an exploring needle they discharge a great quantity of fluid and may so collapse that no more induration can be felt. They are, however, often transition maladies which end in cancer. I remember a woman who came to my office with just such lumps, one in each breast. I punctured them both, and the collapse was so perfect that I could feel no induration whatever after the fluid was discharged. I did not see her again for two years, when one day she came to me with both breasts the seat of extensive and incurable cancer. It is not sufficient, then, to make the diagnosis of cyst. These cases have to be carefully watched and often operated on. In any case of doubt, when the doubt is not relieved by an exploratory puncture, the lump should be subjected to an exploratory incision, and it is not only better surgery but it is far more humane to do what is necessary at once rather than to keep a patient in anxiety for months while the doctor is making up his mind what to do.

There is a class of tumors in whose treatment the whole profession need educating, viz., the tumors of the stomach, liver, and bowels. The great mass of medical men are inclined to look upon all operations for the relief of such maladies in the abdomen with suspicion, as a species of surgical gymnastics. There are several reasons why physicians should reconsider that judgment. In the first place there have been many cases in which excision of the pylorus has been followed by several years of good health, and others in which much temporary relief has been obtained in pyloric cancer by gastro-enterostomy. As with cancers elsewhere, the great obstacle to success in these cases is the delay in operating. Patients will rarely put themselves under the surgeon until their case has become desperate. If the surgeon were permitted to operate before exhaustion took place, as soon as the occurrence of chronic vomiting indicated the existence of obstruction, I am confident that the record of these cases would be presented in a much brighter light. The pylorus, free from adhesions and not extensively involved, could be operated on with much less risk and in much shorter time. There are, however, other grave reasons why in this branch of abdominal surgery early exploratory operations should be made the rule. It is otherwise absolutely impossible in many cases to positively differentiate the malignant conditions from other maladies which have the same symptoms and are quite curable by operative means. One of these is the cicatricial stenosis of the pylorus which may be easily cured by not very formidable operations, and the other is the stenosis caused by inflammations of the gall-bladder and its neighborhood.

Many years ago, a gentleman whom I attended died from obstruction, aud it was supposed, although no tumor could be felt, that he had a pyloric cancer. The post-mortem examination, conducted by Doctor Donald Maclean, revealed a cicatricial stenosis of the duodenum caused by gall-stones,

which had accumulated in the gall-bladder and cystic duct and produced great surrounding inflammation. Had the operations now successfully conducted been then understood, the case might have been radically cured by operative means. There are now many cases on record in which tumors supposed to be cancerous have been found on operating to be inflammatory tumefactions caused by gall-stones. In view of these possibilities we are not justified in simply folding our hands and allowing our patients to drift unaided, when it may be in our power to save them by prompt even though heroic means. The surgeon who operates for cancer and finds gall-stones or cicatricial stenosis need feel no chagrin at his failure in diagnosis if he can thus cure an otherwise incurable malady. The surgery of this whole region is in its infancy, and I look for achievements in the future which will fairly rival those accomplished in the surgery of the pelvis.

The malignant affections of the uterus are so frequently misunderstood that I cannot pass them by without a word. As regards the scirrhus of the body of the uterus in its early stage, the difficulty in diagnosis may be extreme. It is difficult to distinguish the beginning hardness from that of subinvolution, or to know whether the adhesions are due to chronic inflammation or to cancerous deposit; but surely the physician ought to recognize the trouble in its more advanced stage when the whole organ has become involved, and the adhesions to surrounding organs universal, and when all this has taken place under his own eyes by a process of gradual infection. It is surprising to me how long physicians remain in doubt as to the malignant character of epithelioma of the neck of the uterus. The only affections which can be mistaken for it are the simple ulcerations consequent upon lacerations, and the syphilitic ulcers.

It is sometimes difficult to know whether the exuberant granulations and glandular hyperplasia of a lacerated cervix have or have not become cancerous; there is no question that this condition is the most frequent forerunner of cancer.

Now as the operation for cancer should be total extirpation, a most dangerous procedure, it would seem to me better in cases of doubt to operate as for laceration, scraping away all diseased tissues, and uniting the raw surfaces. If then an ulceration begins anew in the healed scar, there should be no longer delay in removing the whole organ. In no case, however, should the practitioner fail in making his diagnosis before the cervix is eaten away and the disease extended on to the vaginal wall.

No other class of disorders offer the same test as to the efficiency of a practitioner as do those of the rectum. It is a disagreeable locality to examine or to have examined, and the fastidious or lazy doctor is inclined to accept a diagnosis on faith rather than annoy himself and his patient with even a digital examination. There is however, no trouble of the rectum sufficiently grave to cause marked symptoms which is not sufficiently grave to demand an examination. It will not do to assume that hæmorrhage from the rectum is due to piles, or a discharge of mucus to dysentery. Careful digital examination will generally enable the surgeon to form an opinion as regards the nature and gravity of any given case. The occurrence of lumps, indurations or ulcers in the rectal wall indicates always a grave condition, whether due to tubercular or syphilitic deposits or peri-rectal abscesses, or to adenomata, or to cancer.

Excepting the mucous polyp, all true tumors of the rectum are apt to be malignant, but with all there may be hope of radical cure by an early operation. By Kraske's method of operating we are now enabled to reach even high tumors of the rectum.

A lady came to me last autumn with a cancerous tumor about two inches from the anus and extending about three inches up the gut. Doctor Osborne and myself both urged its immediate removal, but it was more than three months before she decided affirmatively. The disease had then spread beyond the bowel and involved the surrounding glands and connective tissues. I removed the coccyx and two lower segments of the sacrum, excised three inches of the gut, cleaned out nearly all of the connective tissue and lymphatic glands of the pelvis, opened the peritoneal cavity, detached the rectum and sigmoid flexure from the rim of the pelvis, brought the gut down and united

the severed ends. The patient did well, and left the hospital at the end of six weeks with the wounds nearly healed. When last heard from, the existence of a minute recto-vaginal fistula was the only trouble remaining to disturb her equanimity.

In conclusion I wish to remind the profession of a truth which should influence their actions in favor of early operations in all doubtful cases—and that is that an operation will generally act curatively in cases of false tumors which simulate neoplasms. The inflammatory induration, the old scar, hypertrophied granulations, the accidental cysts, the old hæmatoceles, the chronic ulcers, all are the better for the free incision or even complete removal.

Why then hesitate? In doubtful cases give the patient the benefit of the doubt and make the early exploratory operation. These cases should not be left to their fate. The cure of many cases of cancer lies in the power of the profession. It is to be accomplished by the habit of making careful and thorough examinations and early exploratory operations. The danger of such operations is trifling and cannot be compared with the dangers of delay.

Detroit, Michigan.

IRITIS.

BY DOCTOR E. PROUSE.

The symptoms of iritis are usually marked, though in some cases insidious and quiet. A prominent symptom is pain, situate first in the globe, but soon radiating to the face, and most severe over the brow, following the branch of the fifth nerve; is also more severe at night.

The eyeball is tender to the touch, especially if the ciliary body is affected. There is often flow of tears, dimness of vision in different degress, and photophobia; likewise a dark ring surrounding the cornea, shading off toward the lids, due to hyperæmia of the vessels radiating outwards, and said to be more marked towards the recti muscles. A change in tissue likewise takes place; the bright lustre is lost, and the bright radiating lines become blurred, the surface darker and having a muddy appearance. The pupil will become small by contraction and swelling, and will not respond to light, which may be seen by placing the hand over the eye and quickly removing it, and by comparing the two eyes when only one is affected. This will show that the accommodation may be slightly or completely annihilated.

The cause may be either local or constitutional. The local causes are injuries external to or penetrating the globe, and may be of comparatively unimportant nature, such as squirting of a little cherry-juice into the eye; or may be sympathetic from the other eye.

But ætiologically most frequent and important are the constitutional causes, notably those arising from gouty, rheumatic, and syphilitic diathesis; the latter is responsible for nearly or quite fifty per cent. of the cases. Malarial and other fevers, as well as zymotic diseases, occasionally furnish the cause; but next to syphilis, rheumatism and gout are most at fault, and the attacks are often recurrent. Except when gumma are present, the local signs do not indicate the cause.

Among the complications of iritis are inflammation of the choroid, ciliary body, and retina; glaucoma often follows, and then it is necessary to change the treatment, otherwise serious results speedily ensue. Another complication is the adhesion of the rim of the iris to the cornea, closing the spaces of Fontana, thereby preventing the exit of the overplus of aqueous humor; this distends the anterior chamber and presses the iris back against the lens, between which and the iris adhesions are likely to form. When the margin of the iris is completely attached to the lens, distention in the posterior chamber takes place, giving the iris a peculiar bulging or convex appearance. Also the epithelium of the capsule of the lens may be thickened and increased, resulting in cataract. When the choroid and ciliary body are affected, the vitreous humor may become hazy by molecular infiltration.

In iritis there is swelling and redness of the iris, with engorgement of the vessels and proliferation of the cells. Plastic material is thrown out permeating the aqueous humor, so transforming the latter that fibrous attachments are easily formed, perhaps even developing a false membrane across the pupil; the exuded material, which is partly made up of broken-down cells, gives the aqueous

humor a cloudy appearance, and the lower part of the anterior chamber may be filled with the accumulated part of this material. Again, the plastic material may completely glue the posterior surface of the iris, the ciliary body, and the lens together, closing up the posterior chamber. The glueing together of the iris and cornea causes a closing of the spaces of Fontana, and distention results.—The foregoing belongs more to the plastic variety.

The serous form is less marked, has less congestion and pain, and is more quiet and insidious in its nature; in this variety the ciliary body is often inflamed.

In the suppurative variety traumatism is a frequent cause, and pus forms and drops into the anterior chamber; this is often serious in its results.

In making a diagnosis the severe and paroxysmal pain may be mistaken for neuralgia, with most unfortunate results, hence speedy determination of the exact character of the malady is of vital importance. If we compare iritis and conjunctivitis, we find in the former the deep vessels affected, with a shading-off of the redness towards the lids. In conjunctivitis the superficial vessels are inflamed and the palpebra is in the same condition as the sclera, with this added, that there may be formation of mucus and pus, which does not exist in iritis. In keratitis, photophobia and a flow of tears are much more marked. In glaucoma there is tension and dilatation of the pupil, with pain. There is no tension in iritis; the pupil is contracted, and with the pain there is marked tenderness of the globe which is not found in glaucoma.

Iritis may exist of a quiet nature—that is, with almost no manifestation of pain, redness, or photophobia—and yet be severe in its effects; such cases come on more frequently as the result of sympathetic and inherited diseases. When there is no tension, atropine should be used, and if synechiæ are present there is no doubt about the character of the trouble.

If seen early, correctly diagnosed, and treatment given at once, good results may be expected. Otherwise, synechiæ and membranes will form, which will lessen if not entirely annihilate sight. When there are gummy formations (always due to syphilis), it may be necessary to resort immediately to constitutional treatment, and, while so doing, attempts should be made to repress inflammation, lest its further advance cause permanent injury to sight by the nodules forming attachments to the lens and filling the anterior chamber. If adhesions have formed and by treatment are torn off, leaving spots of pigment on the lens, these will more or less tend to obscure vision; the same result will follow the formation of a fibrous membrane across the pupil. If there has been proliferation of the cells lining the capsule, cataract is apt to follow. Posterior synechiæ will often remain, and if large will impair sight, and these are frequently the cause of recurrence.

The treatment may be both local and constitutional, the former, however, being by far the more important. Sulphate of atropine in solution, four grains to the ounce, should be used at the beginning, middle, and end. When pain is present, combine cocaine with the atropine, but if the conjunctiva is inflamed tropa-cocaine is best, as it will act on an inflamed eye when cocaine will have no effect. Drop the atropine into the eye every hour or two hours; or a plan which I think is better is to drop it in every twenty minutes for three times and then wait three hours and repeat. The object is to dilate the pupil as quickly as possible in order to prevent adhesions of the iris to the lens, and to relieve pain. It is necessary to prevent the constitutional effects of the atropine, and this can be done by drawing the lower lid from the eye for a few minutes after each application, and with a little absorbent cotton at the inner corner of the eye wipe away the overplus of solution, thus preventing it entering the puncta. If glaucoma should supervene, atropine must be stopped and eserine used instead. If there is much congestion, three or four leeches in the temporal fossa will do much good; the bleeding should be encouraged by warm moist applications; but the leeches must not be applied over loose tissue. Water as hot as the patient can bear with comfort, applied from fifteen minutes to two hours at a time, is often of great benefit. —Cold applications are not useful in iritis. Lactophenin will relieve pain if not too severe, but in the latter case morphine must be resorted to. Duboisine combined with co-

'caine may be tried if atropine does not agree. Pilocarpine is also used for the same purpose.

If the conjunctiva is inflamed, a five-per-cent. solution of boracic acid is good; atropine may cause conjunctivitis, and this will help to prevent it. A purgative of calomel, followed by small doses of Epsom salt, will be of great benefit. When the disease arises from syphilis it will require suitable constitutional treatment; and the same is equally true when rheumatism, gout and other diseases are at the bottom of the trouble. Paracentesis may be required to relieve pain, or when there is distention or glaucoma. Iridectomy is done to separate attachments formed and to prevent future attacks of the disease.

Windsor, Ontario.

SOME THERAPEUTIC EFFECTS OF COD-LIVER OIL.

BY CARL E. CONN, M.D.*

The following studies, made in the Laboratory of Experimental Therapeutics in the State University of Iowa, are respectfully submitted to the profession:

Case 1.—F. E. M——, student, twenty-two years old, of slight build, with marked tendency toward tuberculosis—very much emaciated and a low grade of functional activity,—was given cod-liver oil to be taken in two-drachm doses four times daily. At the end of the first week patient had gained two and a half pounds; end of second week, six pounds; end of third week, nine pounds; end of fourth week, eleven pounds.

During first few days a rather peculiar sensation was experienced in the stomach about three hours after taking. This symptom, disappearing the first week, was followed by the appearance of a slight rash over the entire body, very irritating and that caused excessive itching, worst at nights. Rash gradually receded and no further symptoms were noticed. Four weeks after oil was discontinued the patient still maintained the increase in weight, and apparently enjoyed good health.

Case 2.—E. E. S——, carpenter, aged twenty-five, suffering with chronic rhinitis, with extension of disease to infundibulum and frontal sinuses causing constant frontal headache associated with a feeling of weight; senses of smell and hearing very much impaired. Was given cod-liver oil in the usual dose. After three days a very decided improvement was noted, also an increase of weight of four and a half pounds. When last examined the headache had lost its constancy and special senses had almost regained their tonicity.

Case 3.—P. T. D——, student, age twenty-four, had during the fall term in the Chemical Laboratory become very anæmic and emaciated, which he attributed to the obnoxious odors and poisonous gases incident to his work; anorexia was marked, severe nervous headache constant; loss of weight at rate of two pounds per week. Was given cod-liver oil in tablespoonful doses four times daily, from which he received almost immediate benefit, the symptoms disappearing; there was a gain of three pounds in two weeks.

Case 4.—J. P. R——, student, aged twenty-seven, suffered from chronic bronchial catarrh. At the end of a week, under cod-liver oil in two-drachm doses four times daily, a very decided improvement in the cough was noted, and the labored respiration was rendered less difficult; in two weeks he gained three pounds, his appetite was markedly improved, and he slept better. This patient has tried different climates without apparent relief, hence it is gratifying to know that this remedy proved itself so efficient.

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I have also noted that when cod-liver oil was substituted for lard oil (as in U. S. P.) in the preparation of unguentum hydrargyri nitratis (citrine ointment) the latter is much more readily absorbed, especially when applied to mucous membrane, as in a case of hordeolum the exit of pus was facilitated by its employment.

An experiment of interest was recently conducted in this laboratory:

After etherization of one of the lower animals an incision was made into the abdomen, and a portion of the small intestine thoroughly stripped of its contents and ligated in four sections, allowing good (and as near as possible equal) mesenteric circulation, when the following were injected:

1. Improved Lofoten Cod-liver Oil, two drachms:

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2. Improved Lofoten Cod-liver Oil, two drachms, mixed with bile one drachm.

3. Castor oil and bile, two drachms and one drachm respectively.

4. Olive oil, two drachms.

In all these cases and experiments Parke, Davis & Co.'s Improved Lofoten Cod-liver Oil was used, and not in a single instance was it found difficult to administer, or to tend in any degree to nausea.

The intestine was replaced and incision sutured, and animal kept perfectly quiet for four and a half hours; then re-anæsthetized and the portion of intestine ligated removed and contents examined, with the following results:

Numbers 1, 2 and 3 were completely absorbed; in number 4 no absorption had taken place.

It will be observed by the foregoing that the bile did not aid in the absorption of oil.

MANAGEMENT OF VARIOLA.

One chemical agent should be used continuously from the time smallpox is suspected until the patient is able to leave his room, and this is the Cyanide of Potassium in a saturated solution of equal parts by weight with hot water. Place in saucers, or other open vessels, in the room, and as the solution evaporates refill day by day. It is also well, in the height of the disease, to spray, by means of a fine atomizer, a little of this solution, diluted by adding five parts of water, into the air and against the woodwork of the room. It produces no odor, or only a very slight odor of prussic acid, but acts as a complete disinfectant. With proper ventilation and the use of the potassium the room is kept as sweet as if there were no sick person in it; further, the cyanide has been claimed to be a preventive of the disease. Doctor Korndoerfer, of Philadelphia, observed that in an epidemic of smallpox all mechanics who used the salt in their manipulations were exempt from the disease. However this may be, I know by actual experience that it thoroughly disinfects the smallpox patient's room without its own presence being perceived.—Doctor G. W. Winterburn, in *Medical Current.*

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—Published By—

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DETROIT, MICH., DEC. 26, 1894.

Editorial.

THE INDEX MEDICUS.

This valuable periodical is threatened with extinction unless those most interested in its perpetuation come to its rescue. It has been issued by the present publisher for more than ten years, with an annual financial deficit which, if not large, by accumulation must necessarily be burdensome. Its issuance has been accomplished on the basis of eight hundred paying subscriptions, and these up to 1892 were met promptly; but the monetary depression in the autumn of that year culminated in a financial panic in the summer of 1893, with a still persistent depressed money market as a sequel. The accrued result is, that a large number of subscribers have not met their more recent obligations, while not a few have felt compelled to cancel their subscriptions. The publisher is consequently obliged to face a greatly accumulated deficit, far greater than in any previous year, besides an actual loss of several thousand dollars through delinquency. The paying subscription list at this moment is less than half sufficient to sustain the journal on an even basis; yet the publisher has signified his willingness, as his share of a contribution to medical science, to continue the journal, if the annual deficit shall not exceed that of 1891 and previous years, and the editors have likewise generously offered to continue to give their labors gratuitously. It now remains for the medical profession, especially those scholars and authors who are most interested in an index of current medical literature, to decide whether or not this quick aid to medical research and authorship shall be perpetual; and manifestly such perpetuation is possible only by raising the subscription list to the former figure.

With three hundred paying subscribers still

existent, but five hundred more are imperative, and it seems as if a moderately energetic effort should insure this desideratum. With the list again brought up to eight hundred, the publisher will still be required to submit to the tax so generously assumed a decade since.

Objection has been made to the price of subscription: that the *Index Medicus* is $10.00 per year while no other purely American medical periodical commands more than half this sum. A moment's careful consideration of the facts, however, will show that the price is not exorbitant—that if anything it is quite the reverse. The clerical labor demanded in arranging the matter is quadruple that bestowed upon any other journal, medical or secular; typographical arrangement entails an expense for composition nearly double; further, the limited circulation inhibits profitable development along advertising lines, which are the chief sustenance of other periodicals; and this must continue to be an adverse factor, since the strictly scientific and literary character of the publication permits it to reach only the more scholarly and classical portion of the profession.

Certainly there are—there should be—five hundred medical men sufficiently eager for the best development of their profession to be willing to further by aiding this enterprise. We would very much dislike to believe there is not that number of medical gentlemen who would find this work of the utmost benefit to their libraries and a material aid in medical research; and this being admitted, the subscription price becomes a mere nominal figure for value received. American pride, moreover, should sustain a periodical that so distinctly, and in superlative degree, emphasizes the progress of American medical science and literature.

Finally it would seem as if the manufacturing concerns of the United States, who derive sustenance more or less directly through the good will and interests of the medical fraternity, might show some appreciation of the numerous benefits that enable them to reap a monetary harvest, and in no way can this be more effectively done than by assisting in maintaining this publication by tendering it support through its advertising columns. The *Index Medicus* is the great exponent of the education that renders manufacturing pharmacy and chemistry both possible and profitable.

The *Medical News* recently suggested an organized movement be instituted looking to placing the *Index Medicus* in the hands of the Government at Washington, thereby insuring its perpetuation. Certainly the idea is a most excellent one, providing can be eliminated the element of uncertainty that accrues to all measures that are dependent upon the vagaries and caprices of politics. The natural queries just at this juncture are: Can such be accomplished? Has the Government available funds for the enterprise, or must it wait the uncertainty of an appropriation? Further, will the *Index Medicus*, without special safeguards and pledges exacted beforehand, thus serve the best purposes of the body of citizens which it alone can benefit? Notoriously the interest of the average legislator in medical matters is *nil;* and where distribution is dependent upon political preference and patronage, the experience of the past has been that scientific publications rarely reach those by whom they would be most appreciated. In the meantime, must this great journal go to the wall?

It would seem impossible to secure a continuance of the publication except by rallying to its support for another year, meantime retaining in the present publisher's hands awaiting future arrangements. But whatever is done must be done quickly; and we sincerely hope this journal is not fated to untimely demise.

MANUFACTURED THERAPEUTICS.

One of the greatest of the many hydra-headed evils of the nineteenth century, is the persistent attempt to create so-called public opinion at the expense of the profession that is supposed to devote itself exclusively to ministering to the ailments of the human race.

Medical art is compelled to rely for its success upon individual knowledge and expertness in the domain of therapeutics, to which pathology and physiology, in spite of indispensable character, are after all but mere handmaids. Therapeutics *per se*, in practical application, must be the outcome

of careful and judicial weighing of positives and negatives experimentally derived, and while exactness and definiteness necessarily can never wholly accrue—since no one of the human race in either health or disease is an exact prototype of another—a degree of precision can be obtained proportionately to the abilities of the individual practitioner to draw deductions through comparisons.

But during the last decade or so, more than at any time in the history of the civilized world, there has crept into therapeutics a schism of mercenary parentage, insatiable in its greed for pelf. Thereby is fostered a class of pharmaceutical manufacturers who, utterly ignoring the fact that their province is at best merely to cater to the needs of medical art, endeavor, frequently by means most reprehensible, to create a demand for a supply already provided. So far has this gone that a stock of effete and worthless material is often the signal for a new preparation which must speedily be "worked off"—first upon the medical profession until this source of revenue is exhausted, and then upon the unsuspecting and ignorant laity. Thus the legitimate relations between medicine and pharmacy are strained, to the demoralization of the former and disgrace of the latter, and equally to the great detriment (and oftentimes positive harm) of the ill and afflicted.

Moreover, professional men are led, coerced and tricked into receiving as therapeutics, dicta that are based, not upon careful study, experiment, comparison and consideration, but upon mere assumptions.

Then no sooner is the demand created among the fraternity than the latter are used as catspaws to foist the same upon the laity as a panacea for all the ills to which flesh is heir, a subsidized lay press only too eagerly promoting the enterprise.

Members of the medical profession simply cut their own throats while catering to the financial interests of those who for purely selfish ends industriously manufacture therapeutics.

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Since penning the foregoing, attention has been called to the fact in many quarters there is a persistent attempt to revamp Kola as a general panacea. One institution has entered the daily press with most extravagant encomiums, as follows:

The Kola nut is the product of a tree which grows wild in Sierra Leone, Africa. Remarkable properties are attributed to it by the natives, and *modern scientists* have clearly demonstrated that it possesses *unusual* merit as a tonic stimulant. *Many noted physicians* [Names notably wanting—Ed.] have carefully investigated Kola and employed it in their practice, and to-day it has thoroughly established itself with the profession and *general public* as one of the most important curative agents. The wonderful results attained are *all* based on the fresh (undried) nuts, just as the natives use them, and so imported and employed *solely* by . . . .

There is also the dried Kola Nut which *other* manufacturers use in their products of Kola.

The natives use fresh Kola largely with a view of overcoming thirst, hunger, and fatigue, and its sustaining and remedial virtues are said to be remarkable. In their social, political, and religious customs [All of which, of course, are very essential to remedial effects. —Ed.] it occupies an important sphere. . . . Guests are given a few Kola nuts on their departure as an emblem of good will, as it revives and sustains them on their journey. Mohammedans believe that the Kola is of divine origin. Numerous tribes swear upon the Kola as we do upon the Bible. It is really surprising that the wonderful virtues of the nut were not known to the civilized world until so recently, and no wonder that they . . are creating so much attention.*

It certainly is a wonder—a great wonder—that a product that has been "so recently" known to the civilized world should "attract so much attention." It would perhaps be more wonderful if we knew to what extent the above is calculated to benefit the exchequer of the promoter, as *amor nummi* is about the only specific malady which Kola nut can be guaranteed to *cure*, and then only in proportion to the gullibility of the consumer. Such rigmarole is of course calculated to deceive the laity, and at the same time to mislead the medical profession, who are expected to believe here is offered a remedy of unusual and unprecedented powers. In fact, if one were to accept some of the tales, Kola practically affords meat, drink, medicine, clothing, and warmth, besides being

*Italics ours.

a certain "jag cure," an unfailing cardiac regulator, and a positive remedy for d. t., diabetes, impotence, sexual frigidity; that it is a nervine, astringent, cathartic, sudorific, repressant, stimulant, depressant, analgesic, and pretty near everything else!

But what is this Kola nut? Merely the seed of a tree indigenous to tropical regions, possessed of properties identical with those of coffee, tea, guarana, and Paraguayan maté. The chief active principles are caffeine, of which there is about 2.5 per cent.—about one-half the yield in tea, and slightly greater than in roasted coffee; an infinitesimal amount of theobromine; 1.5 per cent. tannin; and starch, cellulose, and the other ordinary constituents of seeds. It is a product so "*new*" that it was described as early as the sixteenth century; and its virtues at that period were so thoroughly tested in Europe, that it was speedily relegated to desuetude. As in its native haunt it is chiefly used by burden-carriers, a class who perform very severe work on comparatively little food, it was perhaps natural their powers of endurance should be attributed to Kola; but as the active principles contained, and its effects upon the economy, are identical with those of tea and coffee, it can be readily understood to what extent and under what circumstances it is apt to act as a refreshing stimulant or as a means of sustenance. The observations made by Surgeon Firth, in the habitat of the nut, on British soldiers,* proved that Kola is in no sense a food, that it does not affect the output of nitrogen from the body, and that while it possesses some slight power when taken continuously under exertion or during fasting, it is far from being marked in warding off the sense of hunger and fatigue, and really inferior to tea. Any benefit that may be derived from it in nervous maladies, in alcoholic craving, or as a diuretic or heart stimulant, depends entirely upon the contained caffeine, while the results claimed to follow upon its administration in diarrhœa and dysentery are only those that accrue to coffee, which, in many countries, notably of Central Europe, is a favorite remedy under like conditions. Upon the reproductive organs its effects are absolutely *nil*.

Thus Kola is one of many sources from whence may be derived caffeine; and an attempt to force anew upon the profession and general public as a "cure all" savors strongly of impudence, since it offers nothing in either dietetics or therapeutics above other cheaper and more profitable sources of this alkaloid. Such procedure, to put it in the most mild light, "constitutes a ghoulish science calculated to delude a dying man with a pretense."

We would not be held as declaring that the sale of, or manufacture of preparations from, Kola is either illegitimate or unfair. On the contrary, if there is a legitimate demand therefor, it is undoubtedly the right and privilege of every pharmacist to cater thereto; but to attempt first to create the demand falsely, and then to force the product upon the public as a panacea, savors too loudly of the schemes of the patent-medicine man and street-corner fakir.

The rubbish, too, regarding "fresh (undried)" Kola, is both sophistical and chimerical. It is well known that all caffeine derivatives are much more rich in alkaloid *after* drying than in a green state, that roast coffee yields a greater percentage than the green berry, and cured tea-leaves more than the undried. Yet so far as Kola is concerned there is no appreciable difference, except perhaps in the amount of useless and effete matters commonly described as "extractives." Then, too, when is remembered the fact this "fresh (undried)" Kola is claimed to be imported from Central Africa and Sierra Leone, or by way of the Soudan, that the means of communication with these portions of the "Dark Continent" by the civilized world are by no means electric or telegraphic in point of speed—that no "Campania" or "Lucania" plies along the pest-ridden shore—that at moderate computation three or four months must intervene between the gathering and laying down in London, which is the distributing mart, and that as many weeks more must elapse ere they can reach the heart of the United States and be transformed into fluid preparations, the value of the adjective *fresh* can be imagined, and likewise what unusual advantages are possessed over the

* *Practitioner*, volume xliii, 1889; *British Medical Journal*, July 27th, 1889.

every-day Kola nuts to be found in any pharmacy.

There are in the market, among the wares of many manufacturing houses, numerous pleasant-tasting preparations of Kola which in some few instances are claimed as positive cures for this, that and the other, all appealing to the worst passions of the race; and examination of the majority of these reveals the fact they are merely—well flavored *toddies!* Their component parts are chiefly alcohol, being made from clear spirits, or sometimes with the addition of a little poor wine or bad brandy, the flavor duly disguised by means of essential oils, aromatics, and syrups. They are intended to cater to the drink habit, and are pledged to relieve "big head" of certain kinds, abolish sexual frigidity, and entirely cure impotence. The price in the main is largely in excess of the value of the drug represented, often indeed exorbitant; but then such preparations must appeal to the class for whom they are especially intended—those who desire cocktails, pick-me-ups, and purported temperance draughts embodying all the stimulant properties of a spirituous liquor,—and the consumer should pay for the luxury.

In the interests of medicine, and in the interests of temperance and morality, we think it a duty of the profession to call a halt, both in the manufacturing and promoting of so-called pharmaceuticals of this class; and we again call attention to the fact that by winking at their manufacture, legitimate business is taken from the practitioner and placed in the hands of the peripatetic laity; that the manufacturer seeks his chief consumer in the lay public; that his interests are sordid, and every way inimical to medical art.

THE LATEST IN ANIMAL EXTRACTS.

Doctor C. F. Britto, of Rangoon, Farther India, in the *Indian Medical Record*, proposes earth-worm soup as a probable remedy for many of the ills of human flesh. Some years since he, like the disciple of old, went "a fishing," and naturally invested in a supply of earth-worms (*Lumbricus terrestris*), which were placed, along with very wet mud, in a cocoanut shell. The supply was greater than the demand, so he held the remainder over for a second day's sport, when—Behold! The next morning the mud had disappeared, while the worms were "buried in a thick, gelatinous-looking mucus." *Ergo*, the worms dissolve mud, hence may be expected to disintegrate calculi and other urinary concretions and deposits. He has not had opportunity to test his theory, but "is going to" when an occasion arises, and hopes in the meantime some of his professional brethren will take up the work. The mode of preparation suggested is, briefly:

After being dug from the earth, the lumbricoids are to be kept in a vessel for half an hour, or until "they have digested all the mud they have eaten." Then a dozen, after being washed with cold water, are to be boiled for half an hour in a couple of gills of water, to make a soup, the whole of which is to be ingested at one dose; of course the soup is to be "prepared fresh each time." But the author is reticent as to the frequency of administration, or the means employed to combat the repugnance of the patient. The closing suggestion is that the chemists of Europe and America prepare an extract—"extractum *lumbrici terrestris*."

Here is an opportunity the "Great Retired" has certainly neglected. Under "personal supervision in his own laboratory," and with the aid of the daily press and the bulletin-board attachments to said laboratory, the possibilities, to say the least, would seem to be startling.

EDITORIAL NOTES.

A New Gynæcological Lubricant.—

Doctor E. C. Dudley, of Chicago, has perfected a new lubricant for gynæcological work, containing glycerin, gum tragacanth, boric acid, starch, and volatile disinfectants, and which appears to serve the purpose intended as perfectly as can be desired. When the hands are well covered the skin is protected from the absorption of ill-smelling products encountered in vaginal and rectal examinations, so that when the lubricant is washed off the fœtid substances and other impurities are also removed. Messrs. Parke, Davis & Co. manufacture under the title of Glycerin Emollient.

The particular advantage of the lubricant

is its great solubility in water, so that after its use the hands can be thoroughly cleansed in an instant by simply holding under a stream of water.

Centenarians.—

A priest of the Greek Church recently died in Thessaly at the age of one hundred and twenty, having served in one parish for ninety-nine years.

Also is reported the death of Sarah Thomas, of Penycoad, Wales, in her one hundred and sixth year. This extreme longevity is popularly ascribed to the habit of smoking which she acquired in her early youth. To the last she was in possession of all her faculties, besides great vivacity of spirits and inexhaustible good humor. Till the day preceding her death she never missed her habitual constitutional, or the enjoyment afforded by her pipe.

Apomorphine in Croup.—

Doctor Alexander Samuels believes Apomorphine of the utmost value in croup, given in one-forty-eighth grain doses every five or ten minutes until emesis results. When the child is past swallowing he administers hypodermatically.

The theory is the same as that which induced Doctor Fordyce Barker to recommend turpeth mineral (yellow sulphuret of mercury), which is most efficacious as an emetic, and consequently in assisting to throw off false membrane.

For Horsemen.—

Pulverized Camphor is frequently recommended for chronic œstrum in mares, given to the amount of five drachm doses daily in the form of balls made with althæa, mucilage, and water.

In our own experience a much more satisfactory remedy is powdered Alum in one-scruple doses three times daily; and this appears to be equally effective with other animals. Powdered Borax administered continuously for a considerable period is equally effective.

The Mississippi Valley Medical Association.—

At the late meeting of this organization, at Hot Springs, Arkansas, the following officers were elected: President, Doctor W. N. Wishard, of Indianapolis; Vice-Presidents, Doctors Thomas E. Holland and Charles B. Parker, of Hot Springs, Arkansas, and Cleveland, Ohio, respectively; Secretary, Doctor Frederick Woodburn, of Indianapolis; Treasurer, Doctor Harold N. Moyer, of Chicago.

The next convention will be held in Detroit.

Doctor Hiram Corson.—

This gentleman, resident of Montgomery County, Pennsylvania, and who has now entered upon his ninety-first year, is the doyen of the American medical profession. He has been in active practice since 1827, is still in excellent health, and devotes a large portion of his time to inditing personal recollections of the anti-slavery movement, in which he took an active part.

Ether as an Intoxicant.—

The *Lyon Médical* states that the habit of ether-tippling, which originally came from England, has existed in France for six years, and that the number of persons addicted thereto is constantly increasing. Cases are not now uncommon in which individuals intoxicated with ether are arrested in the streets.

Somewhat Extraordinary.—

The *North Carolina Medical Journal* is responsible for the statement that at Hendersonville, in the "tar and turpentine" State, a woman sixty-nine years of age gave birth to a child, the father of which had passed his seventieth year.

Increase of Apoplexy.—

In England apoplexy has increased remarkably since 1850. From that date up to 1866 there was an average of 475 deaths per million of inhabitants, and in the year 1886 the ratio had risen to 577 per million.

New Cure for Indigestion.—

The latest idea is to practice whistling for a half an hour after eating. Whatever there may be in it, it must be admitted that good whistlers rarely suffer from indigestion — when they do they don't whistle.

Items and News.

Is Salmon Poisonous to Dogs?—

There is a widely spread belief among people in Oregon and Washington that salmon is very dangerous, and in many cases fatal, to dogs, when eaten. It is claimed that the flesh, and blood more particularly, contain something that is poisonous to the canine. Now I am very skeptical in regard to this salmon theory, and find that many intelligent persons disbelieve it and point to the fact that dogs in Alaska are fed on salmon almost exclusively and no harm results.

There is no doubt that more dogs die here than in the East, but they all have the same symptoms, which are there known by the general term of distemper, which is in reality a catarrhal fever with dysentery. A young dog will be taken sick and mope around the house, refusing to eat. The nose becomes hot and dry. The ears, feet and lips feel cold, and the mouth has a bluish tint; eyes are suffused. Constipation is present at first, but is soon followed by the most offensive dysenteric discharges, until finally the poor dog succumbs from exhaustion. This is a type of the so-called salmon poisoning. I have never seen, in any work on diseases of dogs, mention made of "salmoning," as it is generally called, and doubt the reports of dogs dying with the above-described symptoms miles from any stream of water. Myths die hard, and superstition is as widely diffused as it ever was, only it continually changes its form. I should like the opinions of medical men on this subject, as it is one of much interest to dog-owners.—F. W. VAN DYKE, in *Medical Record.*

Modern Therapeutics and Its Teachings.—

The kind of materia medica that we are drifting into is not only making empirics of the present generation of physicians, but is opening the gates and paving the way for quackery to every man and woman who possesses an ordinary amount of tact and shrewdness. All they have to do is to make themselves and the people believe that they can distinguish one disease from another, then turn to the advertising columns of our medical journals and select the certain and sure specific, of which they will find a vast number for every disease, all provided with full directions for administration. This is the strand toward which we are being driven, and on which we shall surely flounder unless we change our course. . . .

We should at least require of every man, be he doctor, chemist, or pharmacist, who asks us to use a new and unknown medicine, to at least give us a true and fair physiological history of the article. This can be done upon the healthy man and upon animals; it can be done without risk to human life. . . .

We should be very careful in arriving at our conclusions in regard to the true therapeutic action of any remedy, and not base a judgment on a single case, nor attribute every thing that follows the administration of medicine to the remedy alone, for there is a vital force at work in every disease which does far more toward the restoration to health than all our efforts combined, and we should not lose sight of this important fact. I do not wish to seem to be a pessimist in medicine, but I do think our tendency is strongly toward the optimist.—DOCTOR O. F. SEARLE, in *Medical Herald.*

The "Inexcusable Atrocities" of Sport.—

The President of the Society for the Prevention of Cruelty to Animals says: "It is an inexcusable atrocity to subject any animal to pain which can be prevented by a conscientious use of anæsthetics."

It might be supposed that the gentleman was attacking hunters and sportsmen generally, who are committing these inexcusable atrocities every day. As a matter of fact, the writer, while swallowing the camel of sport, is straining at the gnat of vivisection. There are said to be over one hundred thousand men and boys in this country who go hunting with guns. They mutilate and half-kill birds, they maim the rabbits, deer, and other animals, subjecting them to exquisite pains before they die; they chase deer into the water and murder them in their helplessness; they ride after frightened foxes and drive them to a death of agonizing exhaustion; they hook up fish by the sensitive mucous membrane of the mouth and tear them from their wounds, all for sport.

There are, perhaps, half a dozen places in this country where vivisection is done on anæsthetized guinea-pigs, rabbits, and occasionally dogs.

Why doesn't the sensitive anti vivisectionist attack the sportsmen? Is it because he is afraid, or because he is a sportsman himself?—*Medical Record.*

Education and Crime.—

Sir John Lubbock recently addressed the Sociological Congress in Paris upon the effect in England of education upon crime. Since 1870 the number of children in English schools has increased from 1,500,000 to 5,000,000, and the number of persons in prison has fallen from 12,000 to 5,000. The

yearly average of persons sentenced to penal servitude for the worst crimes has declined from 3,000 to 800, while juvenile offenders have fallen from 14,000 to 5,000. Sir John sees in these figures a confirmation of Victor Hugo's saying, that "He who opens a school closes a prison." In France, according to Paris *Temps*, criminal statistics and the statements of magistrates show that as schools have been opened prisons have filled, and that the diffusion of education has been accompanied, apparently, with increase of crime, and especially of juvenile crime. In attempting to account for this phenomenon *Temps* points out that in France, under the Republic, education is simply intellectual instruction. In England there is not only instruction, but training; moral and religious influences are brought to bear upon the children.—*Medical Record.*

Sound Logic.—

The general practitioners are really our best diagnosticians and clinicians. I would say that the specialist should not only be a general practitioner, but he should first have been a country practitioner; second, a city practitioner; third, a specialist. Specialists should grow, not spring up like mushrooms.—Doctor Joseph Price, before the Philadelphia Obstetrical Society.

A Timely Caution.—

The utmost precaution will be needed to secure reliable serum, and care must be exercised in its use. But if we may give credence to the reports already made of successes achieved elsewhere, surely the means will soon be everywhere at command for testing the value of the *serum treatment* of diphtheria.—*The American Practitioner.*

Worth Remembering.—

That the functions of the duodenum are as important as the stomach digestion, and sometimes much more so.

That physiological rest is the first principle of relief in any and all diseases.

It Didn't Work.—

She: Doctor, what do you do when you have a cold?

Doctor: Sneeze, madame!

She: Oh! but I mean what do you take?

Doctor: An extra handkerchief?

Rectal Tube.—

As a means of diagnosis, or in treating stricture beyond the reach of the finger, tubes of any kind are absolutely useless.—Doctor Cripps, in *Medical Record.*

Book Reviews.

The Atlantic Monthly. Price, 35 cents; $4.00 a year. Houghton, Mifflin & Co., Boston.

The December number contains a memorial article on Doctor Holmes, by the editor, in which mention is very properly made of Doctor Holmes's constancy to that magazine. William Sharp gives certain letters of Walter Pater, together with some interesting personal reminiscences. An "Old-Time Sorosis" is an exceedingly entertaining account of a ladies' literary society in Norwich, Conn. Franklin Eastman contributes a plain-spoken epistle to an English friend. Agnes Repplier considers "Ghosts." The study of Reginald Pole is concluded, his life as Archbishop of Canterbury being also a history of the attempted restoration of the Church of Rome in the England of Queen Mary. A Christmas flavor is given to the number by Sir Edward Strachey's "Christmas at an English Country House," and a graceful tale entitled "The Christmas Angel." C. Howard Walker contributes "Suggestions on the Architecture of School Houses." A noteworthy piece of fiction is the conclusion of Mrs. Foote's striking novelette, "The Trumpeter," the second part dealing with a fragment of Coxey's army in their far-western march.

The Review of Reviews Price, 25 cents; $2.50 per year. The Review of Reviews Co., New York.

The December number of this well known periodical is more than usually interesting. There are the regular departments of "Progress of the World," "Current History in Caricature," and "Record of Current Events," with an elaborare *résumé* of the recent elections; "Current Articles of the Month," condensed from principal foreign and American magazines; "Review of Periodicals;" "New Books;" "Contents of Periodicals;" "Alphabetical Index of Articles in Last Month's Periodicals."

Among the special features is "A Character Sketch of Adolph Sutro, Mayor-elect of San Francisco," by E. W. Townsend; "Alexander III.," by W. T. Stead; "How to Reconcile France and Germany;" "Re-establishment of Olympic Games," by Albert Shaw; "Industrial Agreements and Conciliation," by the Premier of South Australia; "Why Not More Forest Preserves?" by Robert U. Johnson. The number also contains new portraits of sixty men and women of the day, and about forty other timely illustrations.

THE AMERICAN NATURALIST. Price, 35 cents; $4.00 per year. The Edwards & Docker Co., Philadelphia.

The November number contains: "The Mechanical Cause of Folds in the Aperture of the Shell of the Gasteropod," by William H. Dall; "Some Birds of Paradise of New Guinea," by Geo. S. Meade; "The Psychology of Hypnotism," by Doctor James Weir, Jr.; "Rules of Nomenclature Adopted by the International Zoölogical Congress in 1892," by Moritz Fischer; "Prairie Chickens and Wild Pigeons in Jackson County, Michigan, 1894," by L. Whitney Watkins.

The December number presents an article by Warren Upham entitled "Quaternary Time Divisible into Three Periods;" by Charles E. Bessey, "The Homologies of Uredineæ;" by Charles H. Reade, "Evolution of Art of the Working Stone;" by Clarence M. Wood, "Zoölogy in the High School."

There are the usual editorials, reviews, general notes upon Petrography, Geology, Paleontology, Botany, Zoölogy, Entomology, Archæology, Ethnology, and proceedings of scientific societies.

THE COSMOPOLITAN MAGAZINE. Price, 15 cents; $1.50 per year. Cosmopolitan Publishing Co., Irvington-on-Hudson, N. Y.

The relation which price bears to quality in literature is made obscure by the Christmas number. Stories by Rudyard Kipling, William Dean Howells, Mrs. Spencer Trask, Mrs. Burton Harrison, and Albion W. Tourgée, are interspersed with poetry by Sir Edwin Arnold, Edmund Clarence Stedman, and James Whitcomb Riley, while through the number are scattered illustrations by such famous artists as Remington, Toché, Reinhart, Turner, Van Schaick, Gibson, and Stevens. A series of portraits of beautiful women of society illustrate an article on "The Relations of Photography to Art;" a travel article by Napoleon Ney, grandson of the famous Field Marshal; one of the series of Great Passions of History, to which Froude and Gosse have already contributed; and half a dozen others equally interesting, go to make up the attractions of the number.

POPULAR SCIENCE MONTHLY. Price, 50 cents; $5.00 a year. D. Appleton & Co., New York.

The December number is especially interesting. Mary T. Bissell writes of "Athletics for City Girls," Sanger Brown of "Responsibility in Crime," David S. Jordan of "The Need of Educated Men," Doctor F. Paulsen of "The University as a Scientific Workshop," Professor E. P. Evans of "Pithecoid Man," James Sully of "Studies of Childhood," Doctor T. Verblen of "The Economic Theory of Woman's Dress," Nobuto Kishimoto of "Shinto, the Old Religion of Japan," Professor William H. Davis of "The Ancient Outlet of Lake Michigan," Henry Wurtz of "The Chemistry of Sleep," F. J. H. Merrill of "The Geology of Natural Scenery," Professor W. T. Sollas of "Geologies and Deluges." There is also a "Sketch of Zadoc Thompson;" the usual "Editor's Table," "Literary Notices," "Popular Miscellany," and "Notes."

THE PHRENOLOGICAL JOURNAL. Price, 15 cents; $1.50 per year. The Fowler & Wells Co., New York.

The December issue presents a "Study of Archbishop Corrigan and Doctor O. W. Holmes," by Edgar C. Beall; "How to Study Strangers," by Professor Nelson Sizer; under the caption of "Musicians and Poets" J. S. Van Cleve discusses Whittier, Cowper, Byron, Burns, Holmes, Lowell, Longfellow, Bryant, Riley, Goethe, and Schiller. Under "Phrenological Biography" Charlotte F. Wells writes of the Reverend E. A. Smith. There is also a report of the closing exercises of the American Institute of Phrenology; a chapter upon "Child Culture;" another devoted to "The Science of Health." Editorially, clairvoyants are discussed. There are the usual Library Reviews and Answers to Correspondents.

DONAHOE'S MAGAZINE. Price, 25 cents; $3.00 a year. Donahoe's Magazine Co., Boston.

In the Christmas number Mr. Michael J. Dwyer makes a vigorous and eloquent plea for a "National American Mausoleum;" Reverend A. B. Parker has an exquisite sketch of "Christmas-tide in Acadia;" Katherine E. Conway contributes a poem entitled "A Life-time Love." There are some charming reminiscences of Oliver Wendell Holmes, illustrating the purely human side of his beautiful character; Reverend John Conway, always strong, writes of "The Pulpit;" Reverend John Talbot Smith, in the series of "Eminent Prelates," writes of Mgr. Satolli. In answering the question, "Has Business Really Revived?" John H. Rice calls attention to some elementary economic facts that are too often ignored.

SUN AND SHADE. Price, 40 cents; $4.00 per year. Sun and Shade Publishing Co., New York

This elegant work of art presents an unusually interesting series of photogravures in

its November issue. First is a portrait of Honorable Theodore Runyon, United States Minister to Germany, copied from a photograph by T. C. Schaarwaachter. Others are: William Richard Allen, from a pen-and-ink sketch by Charles Dana Gibson; "Mavourneen," from a painting by William Richard Allan; "The Collector," from a painting by A. Stammel, of Munich; "Type of Beauty," from a drawing by Frederick Dicksee; "The Sphinx," photograph from nature by Mrs. J. M. Appleton; "Holy Family," from an engraving; "Interior of the Capitol at Albany," a photogelatin, from a photograph.

THE CANADIAN MAGAZINE. Price, 25 cents; $2.50 per year. Ontario Publishing Co., Toronto.

The December number contains: "Henry David Thoreau," by George Stewart; "Sport in Troubadour Land," by Robert T. Mullin; "John Brown in Canada," by James Cleland Hamilton; "Hudson's Bay," by George H. Bradbury; "The Thousand Isles," by Frederic W. Falls; "How I Went Duck-Hunting," by Charles Gordon Rogers; "Toronto Art Students' League," by R. Holmes; "Shanghaed—A Yarn of the Dog Watch," by Edgar Bevis; "Astronomical Notes" for December. The poetry is by Reuben Butchart, D. McCaig, John B. Tabb, and Clarence Hawkes.

THE PHYSICIAN'S PERFECT CALL LIST AND RECORD. By Doctor G. Archie Stockwell, F.Z.S. Flexible morocco; long 16mo; pp. 200. Price, $1.50. George S. Davis, Detroit.

The fact this publication has reached its *ninth year* is sufficient evidence of its popularity and practical usefulness. Its paper and binding are alike superb. In size and shape it is by long odds the most convenient and the best of the "Visiting Lists;" moreover, it will not crumple or break down in the pocket.

A prominent feature is the absence of all advertisements and other "dead-wood," and the extremely convenient arrangement of its most practical contents. Of the information afforded, that most demanded for ready reference is to be found upon the inside covers or on the fly-leaves. The posological information and dosage table are to a great extent new departures, being very thorough and complete; further, the latter is newly revised, and embraces the very latest (including the non-official) remedies introduced, up to and inclusive of July, 1894.

Especially commendable is the obstetric table in two colors, and the arrangement for the concise keeping of all accounts, debit, credit, expense, profit and loss, loans, etc. No physician can afford to be without this work.

OLD ENGLISH BALLADS. Edited by Francis B. Gummere. Cloth; 12mo; pp. 478. Price, $1.35. Ginn & Co., Boston.

This is one of the "Athenæum Press Series," in which Messrs. Ginn & Co. aim to furnish a library of the best English literature to the general reader and the student.

The title sufficiently covers the subject matter of the work. We can only add that here are to be found some of the rarest of old English ballads, particularly those relating to that celebrated outlaw Robin Hood which elsewhere are almost impossible to obtain—ballads which it has been our privilege to first see in print when published in the *Penny Magazine* in the early fifties.

The early part of the work is taken up with a hundred or so of pages of introductory, based upon a course of lectures given by the author at Johns Hopkins University in 1883, and constituting a scholarly, critical study of the origin and nature of ballad poetry of popular type.

The use of moderately fine type in appendices, glossary, etc., has permitted the condensation in small space of a work that otherwise would have reached voluminous proportions.

The volume will be of value to all interested in the early popular literature of the English language.

ECLECTIC MAGAZINE. Price, 45 cents; $5.00 per year. E. R. Pelton, New York.

The *Eclectic Magazine* reproduces from foreign periodicals all those articles which are valuable to American readers. Its field of selection embraces all the leading foreign reviews, magazines, and journals, and the tastes of all classes of intelligent readers are consulted in the articles presented. Articles from the ablest writers of the world will be found in its pages.

The following are the names of a few of the leading authors whose articles may be expected to appear in the pages of the *Eclectic* for the coming year: Rt. Hon. W. E. Gladstone; Cardinal Manning; Herbert Spencer; Prof. Huxley; J. Norman Lockyer, F.R.S.; Sir John Lubbock; Prof. A. H. Sayce; Prof. Max Muller; Edward A. Freeman, D.C.L.; Thomas Hughes; Algernon Charles Swinburne; William Black; Count Tolstoi; R. D. Blackmore; Andrew Lang; Thomas Hardy; Mrs. Oliphant; Emilio Castelar, etc., etc.

While the aim of the *Eclectic* is to interest all classes of intelligent readers, its special purpose is to stimulate thought on the higher lines; and it commends itself particularly to physicians, naturalists, teachers, scholars, lawyers, clergymen, and all who desire to keep abreast of the intellectual progress of the age.

Trial subscription for three months, $1.00. The *Eclectic* and any $4.00 magazine, to one address, $8.00.

Therapeutic Brevities.

Some Heart Remedies. — Apocynum is a diuretic and powerful heart tonic, restoring the nutrition of the organ, causing increased muscular tonicity, exhibited in more powerful contractions and increased arterial tension. It regulates the action if irregular in either rhyme or rhythm, especially if such arises from functional causes.

Strophanthus is diuretic owing to its tonic effect on the heart and arteries. It is especially indicated in mitral insufficiency and aortic regurgitation.

If, from the effects of nerve irritation or failure of nerve action from exhaustion, the heart becomes irregular, Cactus will add tone to the nerve centres, and through them regulate the heart's action and produce full, regular pulse. If given in large doses, too often repeated, it will stimulate the contraction of the heart-muscles violently.

Digitalis is probably the oldest heart remedy known. It, like cactus, acts as a tonic upon the nerve centres, and through them adds tone and vigor to the heart's action; it undoubtedly increases the nutrition of the heart-muscles also, and is probably the most reliable of all remedies for its direct tonic effect.

Caffeine is very powerful in the energy it imparts to the heart. In cases of rapid cardiac failure, such as occur in the collapse of cholera, or after some prostrating fever and violent inflammation, it is especially serviceable. It will counteract the depressing effects of chloroform, and may be given also in conjunction with chloral hydrate to prevent the paralyzing effect of the latter. Used in small doses, with morphine hypodermatically, it produces the most desirable results in its influence over that remedy—it benefits the action of the opiate, and prevents its possible unpleasant effects.

Adonis vernalis acts much as digitalis and cactus. Its influence upon the arterial system renders it valuable as a remedy for dropsies, especially of cardiac origin—hydropericardium.

Convallaria has a soothing influence upon the heart, adding also tone and vigor, and strengthening its action when depressed from nerve irritation.—*Medical Times and Gazette.*

Passiflora Incarnata.—Relieves diarrhœa accompanied with much pain, and is a valuable remedy in the restlessness of fever. It is invaluable in the spasms of strychnine-poisoning; has been recommended in chorea; and in hysterical convulsions is decisive and prompt in action. In confinement it is a remedy to be thought of when labor becomes tedious and pain ineffectual, irregular, spasmodic, and excessively painful, the patient being nervous and fretful; here it relaxes the muscles and relieves nervousness, regulates and increases the force of the pains. In reflex trouble peculiar to the diseases of women it is very useful. It is often beneficial in asthma and whooping-cough; is reliable in the spasms of spinal meningitis as well as the restlessness and sleeplessness of children cutting teeth. It sometimes relieves vomiting and morning sickness. I frequently use it in nervous chills of old age, which it always relieves in twenty to thirty minutes. It is a grand remedy and will make many friends on account of its action being so expeditious. One peculiarity of the drug, however, is that while it is a soporific it cannot be depended upon to act as such on two successive nights with the same patient.—Doctor Enri.

Thyroid Extract in Infantile Myxœdema.—In a recent paper before the American Pædiatric Society, Doctor Osler reported successful treatment of infantile myxœdema in which the administration of the Thyroid extract produced the happiest results; first, in the entire loss of the cretinoid aspect, in improvement in color, and in the general nutrition; second, in rapid development, as patient had grown four inches in height in a period of fourteen months, and is able to walk and run—before, he had been carried around in the nurse's arms; third, the mental development has been proportionately striking—for fourteen months his vocabulary consisted of "mama" and "papa," and now he talks fairly well. No one meeting the child for the first time would have any idea that there was anything peculiar about him. Although he is still undersized and undeveloped, not talking as plainly as an ordinary child of his age, the improvement is very marked and gratifying. He took an amount of extract corresponding to about a quarter of a gland in each twenty-four hours.

Indications for Iron.—Iron is indicated in all anæmias unless due to some malignant disease or accompanied by fever. Usually the succinate answers best.

After fevers there is always more or less anæmia, the weakness of the muscular system being evidenced by the acceleration of the pulse on the slightest exertion, as sitting up

in bed. Here iron should be combined with restoratives.

In Bright's disease the muriate tincture, combined with corrosive sublimate and sweet spirit of nitre, is often very effective,

In diabetes, iron should be given with a laxative, and constipation carefully guarded against.

Nervous exhaustion, accompanied by the accumulation of phosphates and hæmatin in the urine, calls for steel with bark.

In the chronic constipation of women, uterine disease characterized by weakness of the uterus or its supports, prolapsus uteri, etc., the hydrated succinate alone fulfills the demand.—*Exchange.*

Lactophenin.—Lactophenin is a certain, reliable, and (in the overwhelming majority of cases) not unpleasant febrifuge. Compared with the fever remedies hitherto in vogue, Lactophenin possesses an advantage in that no injurious and assuredly no dangerous collateral effects have been shown to follow its use.

As an anti-neuralgic and sedative, judged by experience in the clinic, Lactophenin is at least deserving of a place by the side of similar remedies hitherto used. Its superiority lies in the above-mentioned freedom from noxious collateral effects.

With special reference to its application in typhus, it deserves preference to the other medicaments hitherto used, for the reason that it has thus far proved harmless, and, furthermore, seems to exert a certain specific calmative influence on the nervous system.—LIEBREICH, in *Therapeutische Monatshefte.*

Bloodless Operation for Hæmorrhoids.—A brisk purgative is given the previous evening. Before operating, two to four ounces of whiskey are administered, and effective cocainization applied hypodermatically. Anal dilatation, gradual and steady, without rupture of the muscle, is done, and after drying and mopping with cocaine solution, each hæmorrhoid is separately seized, close to its base, firmly between the tip of the thumb, index and middle fingers. It is put on full stretch, then twisted, and finally so completely crushed that it is reduced to a pulp, and none of the investing tunics remain, except in the mucous membrane and its under stratum of fibrous tissue. The mass is then returned and an opium suppository introduced. Thirty-two cases treated in this way gave perfectly satisfactory results.—T. H. MANLEY, in *Boston Medical and Surgical Journal.*

Jamaica Dogwood.—From physiological experiments with this drug, Doctors Ott and Nagle conclude:

It is narcotic; does not affect the irritability of the motor nerves; does not attack the peripheral ends of the sensory nerves; and reduces reflex action by stimulant action on the centres of Setschenow. It promotes a tetanoid state by a stimulant action on the spinal cord, and not by a paralysis of Setschenow's centres. It dilates the pupils, which dilatation passes into a state of contraction upon the supervention of asphyxia. It is a salivator; increases the secretion of the skin; reduces the frequency of the pulse, but increases arterial tension by stimulation of the vaso-motor centre, and this increase of pressure is soon succeeded by a fall due to the weakening of the heart itself.

Abortive Treatment of Gonorrhœa.—Large injections of Permanganate of Potash methodically used, is the best method of treatment yet introduced. Its advantages are: being absolutely painless in cases of anterior urethritis, and scarcely painful in cases of inflammation of the whole tract; it can be commenced or left off without inconvenience; it has no detrimental action on the mucous membrane, but suppresses every trace of discharge from the first lavage, and is successful about eleven times out of fifteen. The size of the injection, its frequency and strength, must be adapted to individual cases. Generally, strengths of 1 to 4,000, or 1 to 2,000, or even 1 to 1,000, are tolerated.—*Times and Register.*

Hæmnial.—This is a new blood-iron albuminate, intended to combat chlorosis, anæmia, rachitis, scrofulosis, and diseases generally accompanied by dyspeptic trouble and loss of appetite. It contains 0.25 to 0.30 per cent. of metallic iron in the form of hæmoglobin and hæmatin; is a dark brown powder of slightly acid taste, fairly soluble in cold water, easily soluble in hot without being coagulated, and freely so in dilute alcohol, which renders its administration possible in connection with vinous restoratives. It is perfectly stable, one part corresponding to about six parts of fresh bullock's blood. It may be administered in doses of eight to sixteen grains, three, four or six times daily, as required.

Menthol in Diphtheria.—Doctor Kastorsky treated thirty-seven cases of diphtheria by painting with a ten-per-cent. alcoholic so-

lution of menthol, with most satisfactory results. The painting was done three times daily by means of a piece of cotton wool. In some cases, however, a single free application was followed by complete disappearance of false membranes within two days. A marked improvement in the patient's general condition was invariably noticed from the beginning of the treatment. The same simple method was successfully practiced in numerous cases of angina, and by Trütovsky in a group of cases of scarlatinal diphtheria. —*British Medical Journal.*

Thyroid-Feeding in Exophthalmic Goitre.—At the recent meeting of the Congress of German Physicians (Vienna), Doctor P. Brund reported most favorable results from the feeding of sheep's and calves' Thyroids in exophthalmic goitre. Of twelve cases so treated, nine showed marked improvement, and some were even cured—the other three showed no change for either better or worse. The treatment was well borne, save in one case in which it apparently induced headache, nausea, anorexia, tachycardia, and loss of flesh.

Arbor Vitæ.—Doctor Whitford, in the *Homœopathic Medical News*, recommends *Thuja occidentalis* for the relief of ulcerated cervix, a condition he considers "more properly expressed by catarrhal granulations."

He places the patient in Sims' position, uses Sims' speculum, cleans all secretions from the cervix with dry cotton, and applies on a tampon a solution of non-alcoholic Thuja in glycerin, 1 to 8. This he repeats twice a week, using hot-water injections and such other hygienic measures as may be indicated.

Cactus Grandiflorus.—This drug produces acceleration of the pulse and rise in the arterial pressure. This acceleration and increase in contractile power of the heart is due to its influence upon the intra-cardiac motor and accelerator ganglia. The increased arterial tension is the result of a slight vaso-motor action, but chiefly from the increased heart action. The pulse-beat becomes more regular and stronger, the increase in the rate being due to shortened diastole.—*Medical Arena.*

Chloroform in Labor.—It increases the rapidity of dilatation of the cervix; preserves the perineum; prevents voluntary restraint on part of the mother; quiets the heart when it is diseased; prevents nervous exhaustion; conserves uterine energy, and thus lessens the tendency to uterine hæmorrhage; increases reflex action of the abdominal muscles in response to perineal pressure; and ameliorates suffering.—Doctor W. B. Sprague, in *North American Practitioner.*

Cystic Calculus.—Litholapaxy is the operation when the patient is an adult with a capacious and tolerant urethra, with a bladder free from severe chronic inflammation, and with a small or medium-sized stone, or, if large, of soft consistence. The suprapubic is the best operation for large and hard calculi. The medio-bilateral operation should be chosen in all other conditions, because it is the easiest, safest, and best.—*Medical Record.*

Abortion of Syphilis.—Syphilis can be aborted by painting a chancre, as soon as it appears, with a solution of bichloride of mercury, ten grains to the ounce of water. All specific germs are killed, and there is only a local sore to heal.—*Medical Summary.*

[The poison is usually absorbed before the chancre makes its appearance.—Ed.]

Codeia in Diabetes Mellitus.—Doctor Bates in the *Medical and Surgical Reporter* cites two cases in which at least temporary recovery occurred and sugar disappeared entirely from the urine under the use of Codeia, strychnine, and podophyllin, conjoined with strict diet—excluding sweets and starchy foods. He regards Codeia as the important agent.

Exophthalmic Goitre.—Sparteine is a very satisfactory remedy in exophthalmic goitre, and may be given in the form of the sulphate in one-twelfth grain doses.—*Medical Summary.*

Cancer.—The pain of inoperable cancer has been found by Aikmann to yield in many cases to Salicylate of Sodium in doses of ten grains three times a day.

Glonoin and the Menses.—Small doses of Nitro-glycerin given for any cause, just prior to the menstrual epoch, will prevent the flow entirely.

Granular Lids.—Curetting and brushing with Corrosive Sublimate is successful in mild but not suited to bad cases.—Trousseau.

Medical Progress.

NUCLEIN IN DIPHTHERIA.—Herein I simply jot down from my clinical note-book an account of the treatment of diphtheria in which Nuclein solution was the sole medicament used, in order to show from personal observation the proofs of its therapeutic value. That no mistake in diagnosis should be made, the membranes taken from patients were all subjected to critical bacteriological test. The report of the bacteriologist showed that the Loeffler bacillus was present in each instance. That the Nuclein gave a most brilliant and surprising account of itself cannot be gainsaid, and no physician could fail to accord it praise; all four cases recovered within periods varying from four to seven days.

I select from the four that one presenting the most typical picture of the disease. The results in this particular case, which was the first to undergo treatment, impressed me so that I determined to make further investigations. The clinical notes run as follows:

October 10th, 1894, I called to see a boy, four years of age, who had been ill for two days and had passed a bad night. On the 11th he was even more restless, the color in face darker in hue, pulse quicker, and breathing more difficult. Membrane had appeared on both tonsils and covered the entire fauces. In the evening respiration was very quick, and on the morning of the 12th the membrane was well formed, extending over the soft palate and hanging down into the mouth. Some treatment had been carried out by the physician in charge—iron and potassium chlorate with a mouth spray prepared with boric acid. It soon became evident something more would be necessary, for the patches kept on growing; and I resorted to Nuclein solution, which was injected into the abdominal tissue under strict antiseptic precautions. The temperature at the time of the first injection was 103°, and the pulse 145. Within two hours another dose was administered in the same manner, and after eight hours the child seemed to be much improved—there was less fever, and the pulse was 110. He had a better night's rest, sleeping soundly for seven hours; and on awakening took nourishment for the first time in three days without complaining.

October 13th, the pulse was down to 100, temperature 99.4°, and improvement noticeable hourly. The membrane loosened and came away in large quantity. On the third day of treatment, only a few pieces of membrane were visible about the uvula.

October 14th, all signs of membrane had disappeared, the temperature was normal and pulse good; no pain in the throat; the patient played in bed and ate and drank with ease. In this case there were eight injections of Nuclein during the entire treatment, and from this date the child made a rapid recovery.

The notable features of the case during the first twenty-four hours were: A fall of temperature amounting to three degrees: Loosening and discharge of the membrane: No rise in temperature when once reduced: No unfavorable after-effects from the use of the remedy or the attack of the disease,—all going to show the power possessed by Nuclein for checking complications, or holding in abeyance other disturbances.

Nuclein solution thus administered in the three other cases gave no unpleasant results, either constitutional or local. The temperature made the same up and down sweeps in two cases the first day, but after that time resumed a down grade with the gradual subsidence of other symptoms; all the cases recovered between the fourth and seventh day from the time of beginning the injections of Nuclein. The ages of the three cases were 3, 5½, and 7 years, respectively.

I find that this product administered hypodermatically carries with it no risk, as no poisonous symptoms of any kind were observed.—DOCTOR J. M. BLEYER, in *American Therapist.*

LEGISLATIVE CONTROL OF MEDICAL PRACTICE.—Dr. Reginald H. Fitz, in an address recently delivered before the Massachusetts Medical Society, gives the following *résumé* of the state of legislation concerning medical practice:

At the present time there are laws intended to regulate the practice of medicine to a greater or less extent in all the States of the Union, except in Massachusetts and New Hampshire.

The requirements of these laws vary within very wide limits. Rhode Island merely demands that the name and residence shall be recorded in the town clerk's office. In Maine and Wisconsin the physician cannot recover compensation unless he has a medical degree from a public medical institution in the United States, or a license from the State Medical Association, or, in Maine, a certificate of good moral character from the town authorities. The simple registration of the diploma or license suffices in Arizona, the District of Columbia, Georgia, Idaho, Indiana, Kentucky, Louisiana, Michigan, Nebraska, Nevada, South Carolina, South Dakota, and Wyoming. The possession of a

diploma or a certificate of qualification from a State or county medical society is sufficient in Kansas and Ohio.

The diploma must be verified by boards of examiners in California, Colorado, Connecticut, Delaware, Iowa, Montana, New Mexico, Oregon, South Carolina, Tennessee, Vermont; by boards of health in Illinois, Kentucky, Louisiana, Missouri, Nebraska, Oklahoma, South Dakota, West Virginia. They are only approved when representing certain periods of study in Maryland, Minnesota, Montana, Nebraska, New York, New Jersey, and North Dakota.

Candidates who have no diploma are required to pass an examination in Alabama, Arkansas, Colorado, Connecticut, Delaware, Missouri, Montana, New Mexico, North Carolina, Oklahoma, Illinois, Iowa, Oregon, Tennessee, Texas, Utah, Vermont, Virginia, and West Virginia.

Examinations are the sole qualification for license in Florida, Maryland, Minnesota, Mississippi, New Jersey, New York, North Carolina (except for graduates prior to 1880), North Dakota, Pennsylvania, Utah, Virginia, and Washington.

The effect of these laws also is extremely various. In Arkansas, California, Florida, Georgia, Ohio, South Carolina, and Texas the laws are said to be either unworthy of the name, contain glaring defects, are of low standard, unsatisfactory, or practically inoperative. Even in North Carolina the law is defied with impunity. On the contrary, in Alabama, Minnesota, and Virginia, the laws are almost ideally perfect. In New York the promise has been more than fulfilled. More and more support is being given to the law in West Virginia, while in Illinois, Indiana, Iowa, Kentucky, and Missouri the laws are efficient, salutary, working well, or meeting with general favor. In New York the number of physicians entering practice has been diminished, and the quality has been improved. Of 327 candidates in 1892, 267 fulfilled the requirements, of whom 244 were regulars, 17 homœopathists, and 6 eclectics. In Indiana 559 practitioners left the State, in Kentucky 400 or 500, and 250 in Minnesota, during the year 1885.—*Druggists Circular.*

Relations of Avian to Human Diphtheria.—Since 1888 diphtheria has sensibly diminished in Belgium, while measles and whooping-cough have increased; in 1892 the number of cases of diphtheria was less than at any time since 1856. M. Schrevens, who has studied the ætiology of diphtheria for many years, has collected a large number of facts which, to him, demonstrate the necessity of certain prophylactic measures. In a recent issue of the *Presse Médicale Belge* he insists on the important part which the Italian hens and game-cocks take in the pathogeny of human diphtheria, and seeks to define exactly the meaning of "avian origin of diphtheria." Diphtheritic germs, he says, preexist in the avian diphtheria, *nifflet;* this is no more spontaneous than is human diphtheria; the hens and cocks are not creators—they only awake into activity the germs sown on the surface of the ground; the passage of the germs on to the mucous membrane of the fowl renders them more apt for later fixation on the mucous surfaces of human beings. The author then gives the results of an inquiry he made last May into the origin of an epidemic at Marcq, a small hamlet, in which he establishes the fact that the germs were transported by some hens bought in a neighboring market-town; four children died among those attacked. He also cites cases at Rumes, due to a cock affected with *nifflet;* the two children first attacked died, but in the meantime they had infected the school and soon ten or more other scholars presented diphtheritic symptoms. M. Schrevens' observations are confirmed by those of Doctor Bricoult at Ressac in 1888, and of Doctor de Dinant at Falmagne in 1891. Both these practitioners agree that chickens affected with avian diphtheria were the starting-points of the epidemics at these places.—*Medical News.*

Menstrual Disorders Due to Bothriocephalus Latus.—Doctor Kahn, of Vilna (*Vratch*, No. 35, 1894, p. 966), has, when residing at Narva, St. Petersburg Government, found many cases of catamenial irregularities induced by *Bothriocephalus latus* (which parasite is widely prevalent amongst the populations of the Baltic provinces). The following is a typical illustration:

A previously healthy and regularly menstruating virgin, aged nineteen, began to suffer from profuse painful uterine hæmorrhage, recurring every two or three weeks, sometimes accompanied by febrile movements, and lasting on each occasion for eight days; simultaneously developed facial pallor, a faint anæmic cardiac murmur, and constipation. On examination per rectum, the womb was found to be tender, slightly enlarged, and rather soft. Iron utterly failed to afford benefit. After a dose of castor oil, the patient voided a portion of *Bothriocephalus latus*, when the administration of male-fern dislodged the parasite entire. Complete recovery followed.

All hostesses of the *Bothriocephalus* always suffer from menstrual disorders, in view of which fact Doctor Kahn emphasizes the proposition that "given a locality infested with *Bothriocephalus*, in every individual case of catamenial disturbances the patient's stools should be carefully examined for the parasite and its ova."

Of other symptoms observed of *Bothriocephalus*, he mentions a "gnawing pain about the navel, sensations of fullness or pressure in the middle abdominal region, dilatation of the pupils, and occasionally—in nervous and anæmic subjects—convulsions. A girl aged twenty-eight suffered from maniacal attacks with hysterical cramps and crying, all of which phenomena disappeared after the expulsion of the intestinal parasite.—*Vratch.*

LEPROSY.—Vincent Richards declares that leprosy is a distinctly specific disease, both hereditary and contagious, though contagion probably occurs only in the ulcerative stage.

While the disease is scattered all over the provinces of India, except Upper Assam and the Chittagong Hill Tracts, it is most prevalent in Western Bengal, Northeastern Bengal, and Benhar.—Eastern Bengal and the sea-coast districts of Orissa and Bengal enjoy comparative immunity. The Mohammedan districts are very much less affected than the Hindu districts. Not only is the disease not more prevalent in those districts where the consumption of fish is greatest, but, as a rule, it is less so; there may be immunity with or without fish-consumption, consequently it cannot be considered a factor in the ætiology of leprosy:

It is much more common among males than females. Segregation is the only real remedy; but its enforcement will be exceedingly difficult, considering the vast number of lepers to be dealt with, and that its efficiency must depend upon the complete isolation of the affected from the general population, and the rigid separation of the sexes.

The remedy being almost, if not quite, impracticable, the evil might be mitigated by establishment of hospitals for the enforced segregation and treatment therein of pauper lepers generally, and others found to be suffering from the ulcerative stage of the disease. Some good might be effected also by the establishment of asylums for the reception of lepers of the better classes, whose friends are able and willing to contribute towards their support.—*Provincial Medical Journal.*

MAKING BRAIN PREPARATIONS.—T lowing method can be recommended if ing dry preparation of the brain be requ it may be freely handled, and further be ed with the usual mixture of oil color, t tine, and gold size; it is superior to the m of Giacomini, inasmuch as less shrinkag discoloration are involved:

As soon as possible after removal, th gan is stripped of membranes, and plac a saturated solution of perchloride of cury (seven and a half per cent.), care taken to avoid distortion of its configur in this solution it is allowed to remai forty-eight hours, at the end of which its shape will be fixed;

Wash in water, then harden in methyl spirit for from three to five weeks.—It is ter that the spirit be changed two or t times during this period:

When quite firm, immerse in turpent and place for three days in an incuba heated to 40° C.:

Change to melted soft paraffin, and all to remain in the incubator just above melting-point of the latter for from four five days:

Extract, cool in water, clean away all p affin, and apply a thick coat of spirit varni —DOCTOR ALFRED W. CAMPBELL, in *Liv pool Medico-Chirurgical Journal*

COLD BATHING DURING MENSTRUATI —Cold bathing during menstruation is a be eficial measure, provided women accusto themselves to the treatment by bathi every day for at least eight days before t arrival of the period, when they can contin during the menstrual flow without an danger. In the case of a very anæmic girl i whom this treatment was instituted it gav most satisfactory results. Houzel, before th recent Boulogne Congress, held that col salt-water baths facilitate the menstrual flow increase the duration of genital life, an likewise increase fecundity in a remarkabl manner.—DOCTOR DEPASSE, in *Gazette d Gynécologie.*

FORMATION OF URINARY MEATUS FROM THE URETER IN THE SIDE.—Doctor Le Dentu has performed this operation for a patient who was threatened with death from retention of urine caused by a tumor. Urine was voided freely through the artificial urinary passage, but the patient died of cachexia the fourteenth day after the operation.—*L'Union Médicale.*

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